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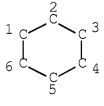

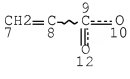

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DEFAULT ECLEVEL IS LIMITED

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RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

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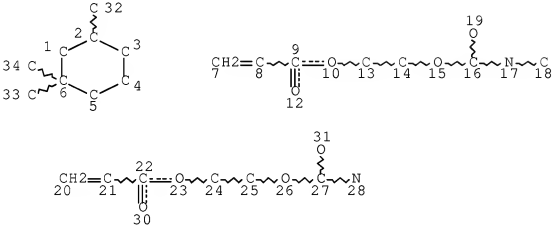

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STEREO ATTRIBUTES: NONE

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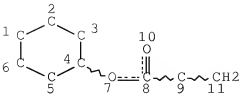

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STEREO ATTRIBUTES: NONE

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YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:Y

STRUCTURE 1, CLAIM 1

L33 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:83716 HCAPLUS Full-text
DN 146:164007
TI Radially polymerizable and curable compositions, resins thereof, molded products, and optical parts
IN Kawasaki, Noboru; Imai, Masao; Otsuji, Atsuo
PA Mitsui Chemicals Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 23pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007016065	A	20070125	JP 2005-196121	200507

PRAI JP 2005-196121 20050705

AB Title compns. comprise (A) H2C:CR1CO(OCH2CH2)mOCH2Q1CH2O(CH2CH2O)mCO C(R1):CH2 (R1 = H, Me; m =0-2; Q1 = dicyclopentanediyl) 30-70, (B) H2C:CR2CO(OCH2CH2)nOQ2 (R2 = H, Me; n = 0-2; Q2 = dicyclopentanyl) or isobornyl (meth)acrylate 30-70, (C) H2C:CR5CO2CH2CR4OCONCH2Q3NCO2 CR4CH2OCOC(R5):CH2 (R4, R5 = H, Me; Q3 = 1,5,5-trimethylcyclohexane-1,3-diyl) 0-20, and (D) other (meth)acrylates 0-20 parts (A + B + C + D = 100 parts), and optionally thermal radical initiators and/or photoradical initiators. Thus, a composition of bis(methacryloyloxymethyl)dicyclopentane (NK Ester DCP) 50, methacryloyoxydicyclopentane (FA 513M) 50, and tert-Bu peroxy-2-ethylhexanoate 0.4 part was degassed and cured between 2 glass sheets at 60-160° for 6 h to give a resin sheet showing transmittance 92%, Tg 180°, flexural modulus 3.5 GPa, H2O absorption 0.15%, and good chemical resistance and curability.

IT 919833-26-4P 919833-28-6P 919833-29-7P
920525-69-5P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radially polymerizable/curable compns. for transparent resins with good heat and water resistance and rigidity)

RN 919833-26-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (CA INDEX NAME)

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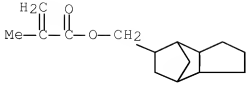
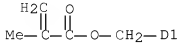
CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

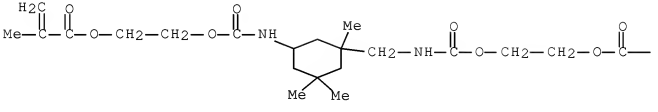




CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A



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CRN 34759-34-7
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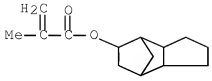
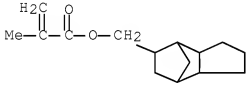


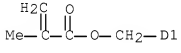
RN 919833-28-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester, polymer with methyl 2-methyl-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

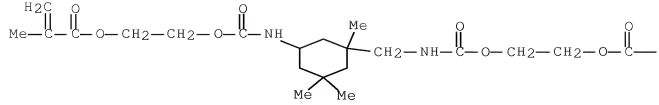




CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A



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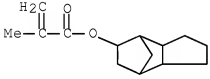
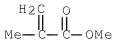
CM 3

CRN 34759-34-7
CMF C14 H20 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2

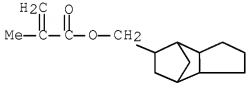


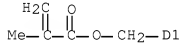
RN 919833-29-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester, polymer with methyl 2-methyl-2-propenoate, rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

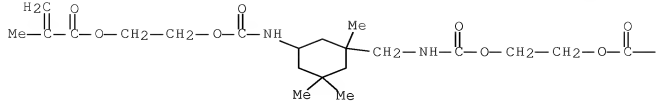




CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A

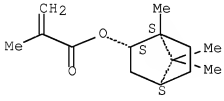


PAGE 1-B

CM 3

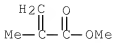
CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



CM 4

CRN 80-62-6
CMF C5 H8 O2

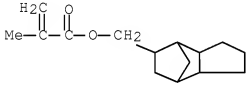


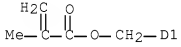
RN 920525-69-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS





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CRN 42405-01-6
CMF C24 H38 N2 O8

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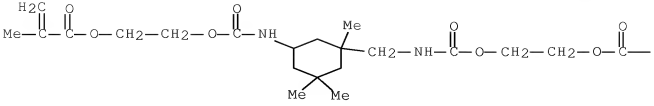

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CM 3

CRN 34759-34-7
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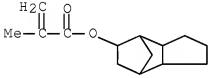

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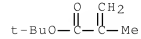
CRN 585-07-9
CMF C8 H14 O2

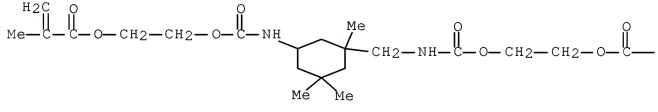


IT 42405-01-6P, 1,5,5-Trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane 76701-94-5P, 1,5,5-Trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(radially polymerizable/curable compns. for transparent resins with good heat and water resistance and rigidity)

RN 42405-01-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl ester (CA INDEX NAME)

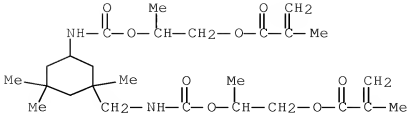
PAGE 1-A



PAGE 1-B

RN 76701-94-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[[3,3,5-trimethyl-5-[[[[1-methyl-2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]oxy]propyl ester (CA INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 73
IT 237768-55-7P 919833-26-4P 919833-27-5P
919833-28-6P 919833-29-7P 920525-69-5P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radially polymerizable/curable compns. for transparent resins with good heat and water resistance and rigidity)
IT 42405-61-6P, 1,5,5-Trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane 76701-94-5P, 1,5,5-Trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(radially polymerizable/curable compns. for transparent resins with good heat and water resistance and rigidity)

L33 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:977100 HCAPLUS Full-text
DN 145:357926
TI Curable compositions, heat-resistant transparent resins, and optical parts
IN Kawasaki, Noboru; Otsuji, Atsuo
PA Mitsui Chemicals Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 28pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2006249220	A	20060921	JP 2005-66890	200503 10

PRAI JP 2005-66890 20050310

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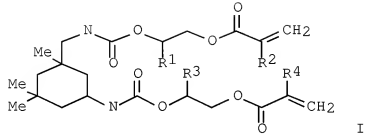

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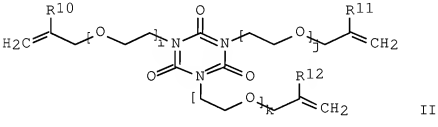


II

AB The compns. comprise (A) IPDI derivs. I (R1-4 = H, Me), (B) compds. selected from EtC[CH2O(CH2CH2O)dCOC(R5):CH2]3 (R5 = H, Me; d = 0-2), O[CH2CEt[CH2O(CH2CH2O)eCOC(R6):CH2][CH2O(CH2CH2O)fCOC(R7):CH2]]2 (R6, R7 = H, Me; e, f = 0-2), C[CH2O(CH2CH2O)gCOC(R8):CH2]4 (R8 = H, Me; g = 0-2), O[CH2CH2[CH2O(CH2CH2O)hCOC(R9):CH2]3]2 (R9 = H, Me; h = 0-2), and (meth)acryloyl group-containing isocyanurates II (R10-12 = H, Me; i, j, k = 1-2), (C) Me methacrylate or/and its syrup, and (D) radical polymerization initiators. Thus, 1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane (preparation described) 40, trimethylolpropane triacrylate (Light Acrylate TMP-A) 35, Me methacrylate 15, isobornyl methacrylate (Acryester IBX) 10, Perbutyl O 0.1, and Perbutyl L 0.2 part were blended, degassed, and cast-molded at 50° for 4 h and 140° for 12 h to give a product showing total light transmittance 92%, haze 0.2%, Tg 181°, pencil hardness 4H, flexural modulus 3.5 GPa, water absorption 0.65%, and good chemical resistance.

IT 909905-36-8P, Acryester IBX-Light Acrylate TMP-A-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer

909905-87-9P, FA 513M-Light Ester TMP-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-88-0P, Aronix M 315-FA 513A-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-89-1P, Blemmer CHMA-Light Ester TMP-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-90-4P, NK Ester A-DPH-methyl methacrylate-NK Ester DCP-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 910048-60-1P, Blemmer CHMA-CX 1033-methyl methacrylate-pentaerythritol tetramethacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 910048-61-2P, Ditrimethylolpropane tetramethacrylate-Light Acrylate IBX-A-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer 910048-62-3P, Light Acrylate PE 4A-methyl methacrylate-tetradecyl acrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable (meth)acrylate compns. for heat-resistant transparent resins for optical parts)

RN 909905-86-8 HCAPLUS

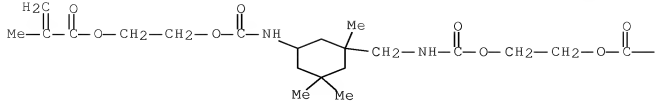
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6

CMF C24 H38 N2 O8

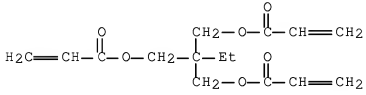
PAGE 1-A



PAGE 1-B

CM 2

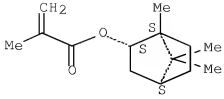
CRN 15625-89-5
CMF C15 H20 O6



CM 3

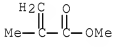
CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



CM 4

CRN 80-62-6
CMF C5 H8 O2

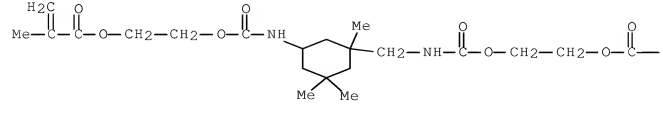


RN 909905-87-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-ethyl-2-[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with methyl 2-methyl-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

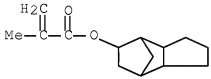
CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A



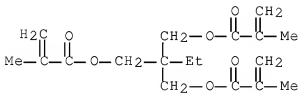
CM 2

CRN 34759-34-7
CMF C14 H20 O2



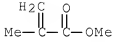
CM 3

CRN 3290-92-4
CMF C18 H26 O6



CM 4

CRN 80-62-6
CMF C5 H8 O2

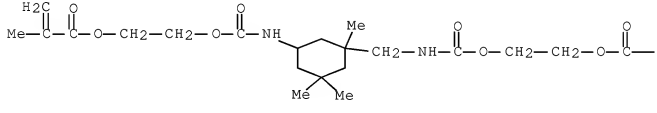


RN 909905-88-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-propenoate, 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate and (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

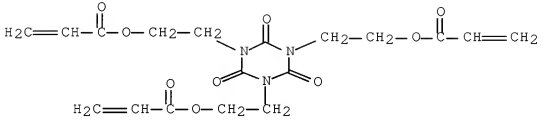
PAGE 1-A



PAGE 1-B

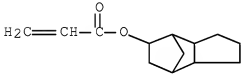
CM 2

CRN 40220-08-4
CMF C18 H21 N3 O9



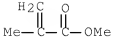
CM 3

CRN 7398-56-3
CMF C13 H18 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2

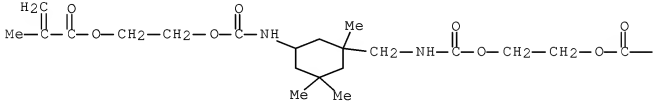


RN 909905-89-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-ethyl-2-[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with cyclohexyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

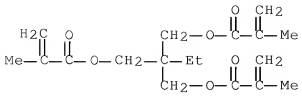
PAGE 1-A



PAGE 1-B

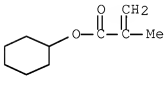
CM 2

CRN 3290-92-4
CMF C18 H26 O6



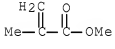
CM 3

CRN 101-43-9
CMF C10 H16 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2

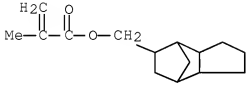


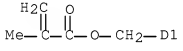
RN 909905-90-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with methyl 2-methyl-2-propenoate, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-

propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

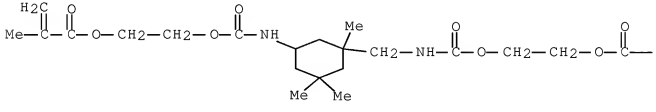
CRN 43048-08-4
CMF C20 H28 O4
CCI IDS





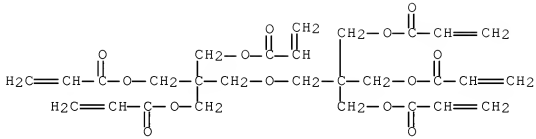
CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8



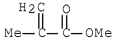
CM 3

CRN 29570-58-9
CMF C28 H34 O13



CM 4

CRN 80-62-6
CMF C5 H8 O2



RN 910048-60-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2,2-bis[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with CX 1033, cyclohexyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-

propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

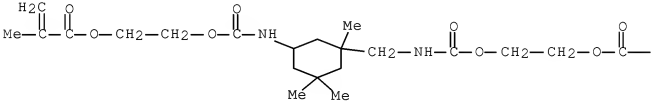
CRN 809289-96-1
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

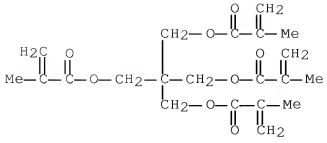
PAGE 1-A



PAGE 1-B

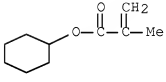
CM 3

CRN 3253-41-6
CMF C21 H28 O8



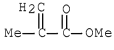
CM 4

CRN 101-43-9
CMF C10 H16 O2



CM 5

CRN 80-62-6
CMF C5 H8 O2

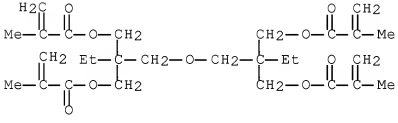


RN 910048-61-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[[2,2-bis[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl ester, polymer with methyl 2-methyl-2-propenoate, rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate and

2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

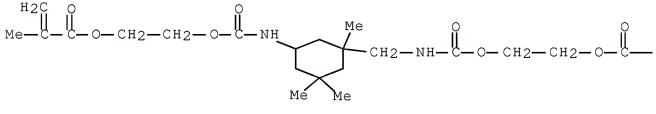
CRN 52733-11-6
CMF C28 H42 O9



CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A

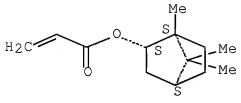


PAGE 1-B

CM 3

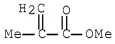
CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.



CM 4

CRN 80-62-6
CMF C5 H8 O2

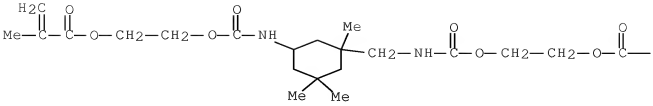


RN 910048-62-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, tetradecyl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

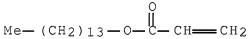
PAGE 1-A



PAGE 1-B

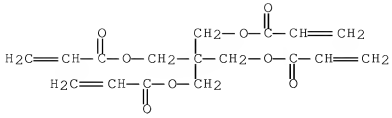
CM 2

CRN 21643-42-5
CMF C17 H32 O2



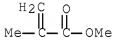
CM 3

CRN 4986-89-4
CMF C17 H20 O8



CM 4

CRN 80-62-6
CMF C5 H8 O2

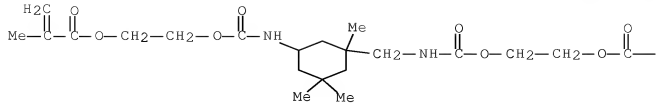


IT 42405-01-6P, 1,5,5-Trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane 76701-94-5P, 1,5,5-Trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(curable (meth)acrylate compns. for heat-resistant transparent resins for optical parts)

RN 42405-01-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl ester (CA INDEX NAME)

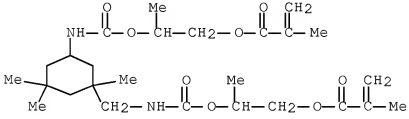
PAGE 1-A



PAGE 1-B

RN 76701-94-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[[3,3,5-trimethyl-5-[[[[1-methyl-2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]oxy]propyl ester (CA INDEX NAME)



CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73

IT 909905-86-8P, Acryester IBX-Light Acrylate TMP-A-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer 909905-87-9P, FA 513M-Light Ester TMP-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-88-0P, Aronix M

315-FA 513A-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-89-1P, Blemmer CHMA-Light Ester TMP-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-90-4P, NK Ester A-DPH-methyl methacrylate-NK Ester DCP-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 910048-60-1P, Blemmer CHMA-CX 1033-methyl methacrylate-pentaerythritol tetramethacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 910048-61-2P, Ditrimethylolpropane tetramethacrylate-Light Acrylate IBX-A-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer 910048-62-3P, Light Acrylate PE 4A-methyl methacrylate-tetradecyl acrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable (meth)acrylate compns. for heat-resistant transparent resins for optical parts)

IT 42405-01-6P, 1,5,5-Trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane 76701-94-5P, 1,5,5-Trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(curable (meth)acrylate compns. for heat-resistant transparent resins for optical parts)

IT 80-43-3, Percumyl D 2123-88-8, Perbutyl L 3006-82-4, Perbutyl O 7473-98-5, Darocur 1173 13122-18-4, Perbutyl 355 24650-42-8, Irgacure 651 75980-60-8, 2,4,6-Trimethylbenzoyldiphenylphosphine oxide
RL: CAT (Catalyst use); USES (Uses)
(radical initiator; curable (meth)acrylate compns. for heat-resistant transparent resins for optical parts)

L33 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:1048762 HCAPLUS Full-text
DN 143:327391
TI Radiation-curable urethane (meth)acrylate compositions and optical

sheets using their lens arrays
IN Konami, Yukichi; Nakagawa, Takeshi
PA Mitsubishi Rayon Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005263913	A	20050929	JP 2004-76452	200403 17

PRAI JP 2004-76452 20040317

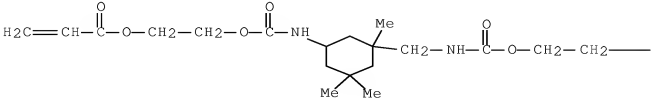
AB The compns. contain (A) urethane di(meth)acrylates 40-90, (B) urethane poly(meth)acrylates 0-50, (C) (meth)acrylyol-containing compds. other than A and B 10-40, and (D) radiation-sensitive radical polymerization initiators 0.01-5 parts, and show Vickers hardness 12-25 at 20° after curing. The optical sheets are useful for projecting apparatus, backlights for liquid crystal displays, etc. Thus, IPDI (I) was treated with 2-hydroxyethyl acrylate (II) to give 1:2 I-II adduct. A composition containing the adduct 70, nonabutylene glycol dimethacrylate 10, phenoxyethyl acrylate 20, and 2-hydroxy-2-methyl-1-phenylpropan-1-one 1 part was poured between a roller having prismatic surface protrusions and a travelling PET substrate film, and irradiated with UV to give a prism sheet showing good heat and scratch resistance.

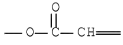
IT 42404-50-2P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(radiation-curable urethane (meth)acrylate compns. as lens arrays showing good heat and scratch resistance for optical sheets)

RN 42404-50-2 HCAPLUS

CN 2-Propenoic acid, 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl ester (CA INDEX NAME)

PAGE 1-A





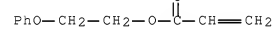
IT 865446-86-2P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-curable urethane (meth)acrylate compns. as lens arrays showing good heat and scratch resistance for optical sheets)

RN 865446-86-2 HCAPLUS

CN 2-Propenoic acid, 2-phenoxyethyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,4-butanediyl) and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

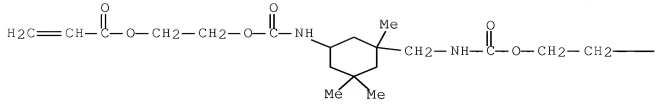
CRN 48145-04-6
CMF C11 H12 O3



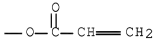
CM 2

CRN 42404-50-2
CMF C22 H34 N2 O8

PAGE 1-A

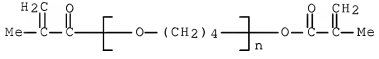


PAGE 1-B



CM 3

CRN 28883-57-0
CMF (C4 H8 O)n C8 H10 O3
CCI PMS



IC ICM C08F290-06
ICS C08F299-06; G02B001-04
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35, 73, 74
IT 42404-50-2P 101162-60-1P 847459-65-8P 865446-83-9P
865446-84-0P 865446-85-1P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(radiation-curable urethane (meth)acrylate compns. as lens arrays showing good heat and scratch resistance for optical sheets)
IT 865446-86-2P 865446-87-3P 865446-88-4P 865446-89-5P

865446-90-8P 865446-91-9P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radiation-curable urethane (meth)acrylate compns. as lens arrays showing good heat and scratch resistance for optical sheets)

L33 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:638061 HCAPLUS Full-text
DN 143:134505
TI Methacrylic resins with good heat and chemical resistance and hue for transparent components
IN Kawasaki, Noboru; Otsuji, Atsuo
PA Mitsui Chemicals Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005194505	A	20050721	JP 2004-344597	20041129
PRAI JP 2003-409319	A	20031208		

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title resins are obtained by polymerizing compns. comprising (A) Me methacrylate monomers and/or their syrups, (B) compds. I, (C) hindered amine light stabilizers II and/or III, and (D) radical initiators, wherein R1 = R2 = H or methyl; R3 = R4 = H or methyl; R5, R6 = IV; R7 = R8 = R9 = R10 = R11 = R12 = H or methyl; m = 1-8 integer; and n = 0-3 integer. Thus, 200.0 g isophorone diisocyanate and 234.2 g 2-hydroxyethyl methacrylate were reacted at 70° for 8 h in the presence of dibutyltin dilaurate and 2,6-di-tert-butyl-4-methylphenol to give 1,3,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane, 20 parts of which was mixed with Me methacrylate 60, CX 1033 (Me methacrylate syrup) 40, tert-Bu methacrylate 10, Sanol LS 770 0.65, JP 650 (antioxidant) 0.40, cumylperoxyneodecanoate 0.26, and tert-butylperoxy-2-ethylhexanoate 0.26 parts, poured into a mold, and heated at 50° for

5 h and 120° for 2 h to give a test piece with good surface appearance, acetone, toluene, and 10% sodium hydroxi solution resistance, haze 0.2%, yellow index 3.88 initially, 4.02 after heating, glass transition temperature 135°.

IT 858948-25-3P, tert-Butyl methacrylate-CX 1033-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer 858948-36-4P, CX 1033-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer 858948-37-5P, tert-Butyl methacrylate-CX 1033-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 858948-38-6P, CX 1033-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylic resins with good heat and chemical resistance and hue for transparent components)

RN 858948-35-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with CX 1033, methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

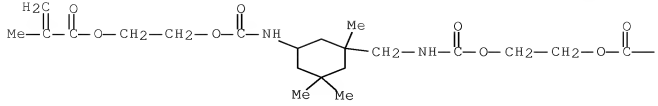
CRN 809289-96-1
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

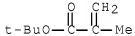
PAGE 1-A



PAGE 1-B

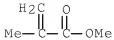
CM 3

CRN 585-07-9
CMF C8 H14 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2



RN 858948-36-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with CX 1033 and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

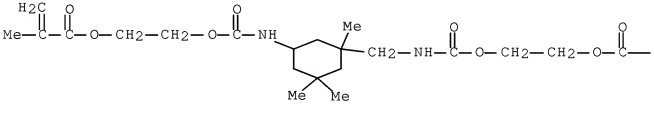
CRN 809289-96-1
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

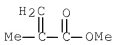
PAGE 1-A



PAGE 1-B

CM 3

CRN 80-62-6
CMF C5 H8 O2



RN 858948-37-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with CX 1033, methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

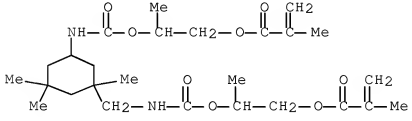
CM 1

CRN 809289-96-1
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

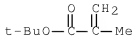
CM 2

CRN 76701-94-5
CMF C26 H42 N2 O8



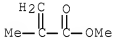
CM 3

CRN 585-07-9
CMF C8 H14 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2



RN 858948-38-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with CX 1033 and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

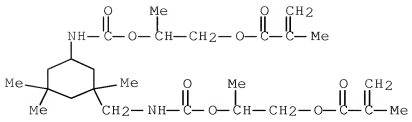
CM 1

CRN 809289-96-1
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

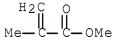
CM 2

CRN 76701-94-5
CMF C26 H42 N2 O8



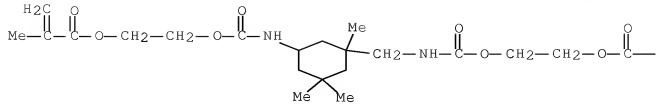
CM 3

CRN 80-62-6
CMF C5 H8 O2



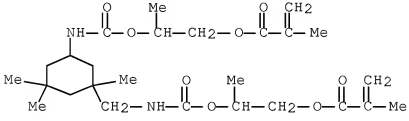
IT 42405-01-6P, 1,5,5-Trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane 76701-94-5P, 1,5,5-Trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(monomer; methacrylic resins with good heat and chemical resistance and hue for transparent components)
RN 42405-01-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

RN 76701-94-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[[[[3,3,5-trimethyl-5-[[[[1-methyl-2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]oxy]propyl ester (CA INDEX NAME)



IC ICM C08F220-14
ICS C08F220-36; C08K005-3435; C08K005-524; C08L033-14
CC 38-3 (Plastics Fabrication and Uses)
IT 858948-35-3P, tert-Butyl methacrylate-CX 1033-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer
858948-36-4P, CX 1033-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer

858948-37-5P, tert-Butyl methacrylate-CX 1033-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 858948-38-6P, CX 1033-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylic resins with good heat and chemical resistance and hue for transparent components)

IT 42405-01-6P, 1,5,5-Trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane 76701-94-5P, 1,5,5-Trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(monomer; methacrylic resins with good heat and chemical resistance
and hue for transparent components)

L33 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:1080946 HCAPLUS Full-text
DN 142:57311
TI Crosslinkable methacrylic resin composition and transparent member
IN Kogo, Osamu; Kawasaki, Noboru; Enna, Masahiro
PA Mitsui Chemicals, Inc., Japan
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004108778	A1	20041216	WO 2004-JP8404	20040609

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1632507		A1	20060308	EP 2004-745953	20040609
	R: DE, FR, GB, IT				
CN 1784433		A	20060607	CN 2004-80012529	20040609
EP 1867665		A2	20071219	EP 2007-18901	20040609
EP 1867665		A3	20080402		
	R: DE, FR, GB, IT				
KR 749004		B1	20070813	KR 2005-723210	20051202
US 20060155085		A1	20060713	US 2005-559821	20051208
KR 2007030917		A	20070316	KR 2007-701701	20070124

PRAI JP 2003-163748 A 20030609
JP 2003-360521 A 20031021
EP 2004-745953 A3 20040609
WO 2004-JP8404 W 20040609
KR 2005-723210 A3 20051202

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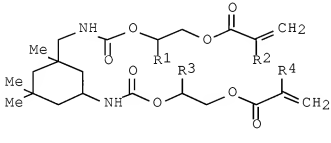


I

AB The composition contains (A) a Me methacrylate monomer and/or a syrup thereof, (B) compound I (R1 and R3, and R2 and R4 independently represent H atoms or Me groups), and (C) a radical initiator. This composition enables to obtain a crosslinked methacrylic resin with improved properties such as heat resistance, rigidity, low water absorbency and chemical resistance without deteriorating high transparency of original PMMA. A transparent member and an optical member composed of such a resin are also disclosed.

IT 808741-48-2P 808741-49-3P 808741-50-6P
808741-51-7P 808741-52-8P 808741-53-9P
808741-54-0P 808741-55-1P 808741-56-2P
808741-57-3P 808741-58-4P 808741-59-5P
809241-89-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylic resin compns. with good chemical, heat and water resistance for transparent and optical materials)

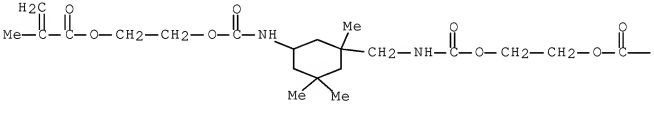
RN 808741-48-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A



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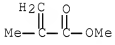
CM 2

CRN 80-62-6
CMF C5 H8 O2



RN 808741-49-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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CRN 76701-94-5
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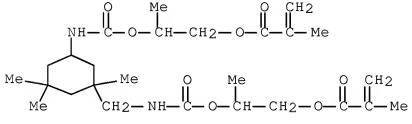
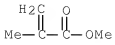


CM 2

CRN 80-62-6
CMF C5 H8 O2



RN 808741-50-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-propenoate (9CI) (CA INDEX NAME)

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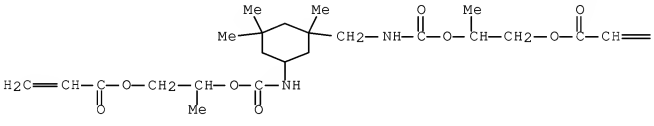
CRN 65801-84-5
CMF C24 H38 N2 O8

PAGE 1-A



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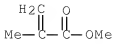
CM 2

CRN 80-62-6
CMF C5 H8 O2

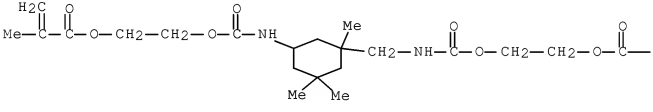


RN 808741-51-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A



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CM 2

CRN 7398-56-3
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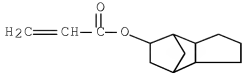
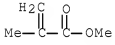


CM 3

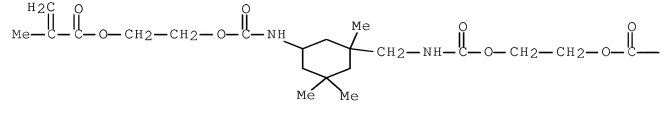
CRN 80-62-6
CMF C5 H8 O2



RN 808741-52-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8



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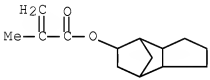

CM 3

CRN 80-62-6
CMF C5 H8 O2

RN 808741-53-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-[(octahydro-4,7-methano-1H-inden-5-yl)oxy]ethyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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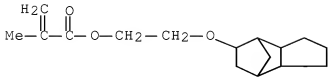
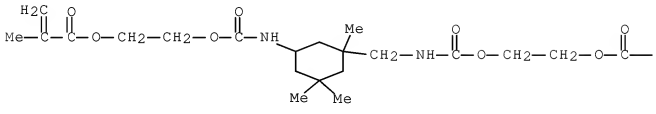
CRN 88449-54-1
CMF C16 H24 O3



CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A



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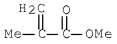
CM 3

CRN 80-62-6
CMF C5 H8 O2

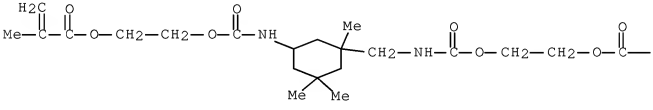


RN 808741-54-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A

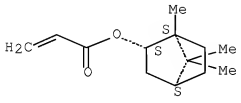


PAGE 1-B

CM 2

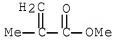
CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.



CM 3

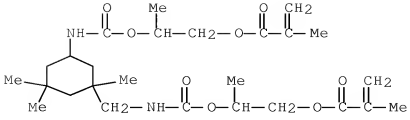
CRN 80-62-6
CMF C5 H8 O2



RN 808741-55-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

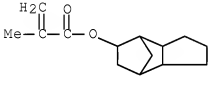
CM 1

CRN 76701-94-5
CMF C26 H42 N2 O8



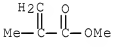
CM 2

CRN 34759-34-7
CMF C14 H20 O2



CM 3

CRN 80-62-6
CMF C5 H8 O2

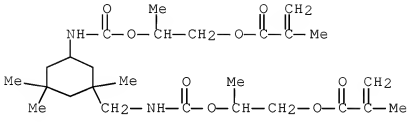


RN 808741-56-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX

NAME)

CM 1

CRN 76701-94-5
CMF C26 H42 N2 O8



CM 2

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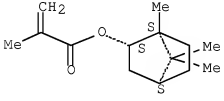
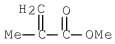
CMF C14 H22 O2

Relative stereochemistry.



CM 3

CRN 80-62-6
CMF C5 H8 O2



RN 808741-57-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with cyclohexyl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 76701-94-5
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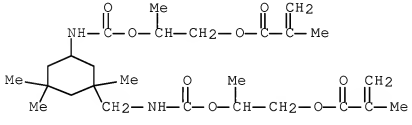
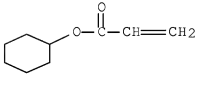


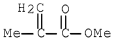
CM 2

CRN 3066-71-5
CMF C9 H14 O2



CM 3

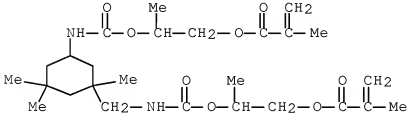
CRN 80-62-6
CMF C5 H8 O2



RN 808741-58-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, cyclohexyl ester, polymer with methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

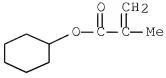
CM 1

CRN 76701-94-5
CMF C26 H42 N2 O8



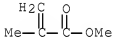
CM 2

CRN 101-43-9
CMF C10 H16 O2



CM 3

CRN 80-62-6
CMF C5 H8 O2



RN 808741-59-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, decahydro-1,4:5,8-dimethanonaphthalen-2-yl ester, polymer with methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 111404-25-2
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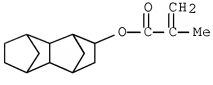
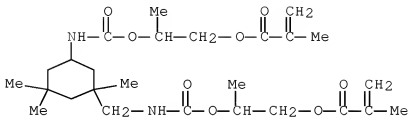


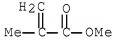
CM 2

CRN 76701-94-5
CMF C26 H42 N2 O8



CM 3

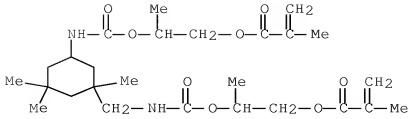
CRN 80-62-6
CMF C5 H8 O2



RN 809241-89-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

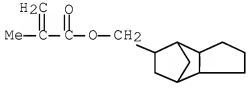
CM 1

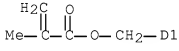
CRN 76701-94-5
CMF C26 H42 N2 O8



CM 2

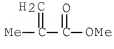
CRN 43048-08-4
CMF C20 H28 O4
CCI IDS





CM 3

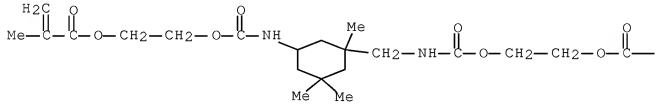
CRN 80-62-6
CMF C5 H8 O2



IT 42405-01-6P 65801-84-5P 76701-94-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(methacrylic resin compns. with good chemical, heat and water resistance for transparent and optical materials)

RN 42405-01-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl ester (CA INDEX NAME)

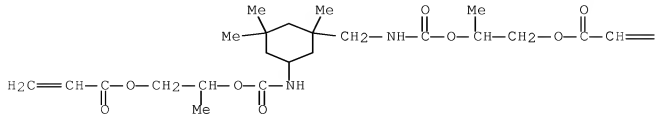
PAGE 1-A



PAGE 1-B

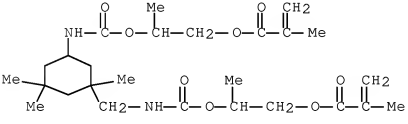
RN 65801-84-5 HCAPLUS
CN 2-Propenoic acid, 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



═CH2

RN 76701-94-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[[[[3,3,5-trimethyl-5-[[[[1-methyl-2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]oxy]propyl ester (CA INDEX NAME)



IC ICM C08F220-14
ICS C08F220-36
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT 808741-48-2P 808741-49-3P 808741-50-6P
808741-51-7P 808741-52-8P 808741-53-3P
808741-54-0P 808741-55-1P 808741-56-2P
808741-57-3P 808741-58-4P 808741-59-5P
809241-89-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylic resin compns. with good chemical, heat and water resistance for transparent and optical materials)
IT 42405-01-6P 65301-84-5P 76701-94-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(methacrylic resin compns. with good chemical, heat and water resistance for transparent and optical materials)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L33 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:739994 HCAPLUS Full-text
DN 141:244399
TI Urethane acrylate-containing foamable photopolymerizable sealing compositions
IN Figovsky, Oleg; Shapovalov, Leonid; Potashnikov, Raisa; Tzaid, Yury; Bordado, J.; Letnik, David; De Schijuer, Aster
PA Acryfoam Ltd., Israel
SO U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 20040176485	A1	20040909	US 2003-379821	20030306
US 6960619	B2	20051101		
PRAI US 2003-379821		20030306		

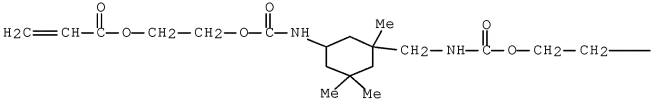
AB A foamable photopolymerizable liquid composition comprises (a) at least two acrylic-based oligomers, (b) at least a first and a second radical producing means liberating radicals for polymerization of the oligomers upon exposing the composition to light or to ambient temperature, (c) at least a first and a second blowing agent to supply a gas for foaming the liquid composition, the acrylic-based oligomers comprising a first oligomer of a trifunctional oligoester provided with acrylic end groups, and a second oligomer of a difunctional oligomer provided with at least two urethane groups and at least two acrylic and/or methacrylic end groups, the ratio between the first and the second oligomer being from 1:0.5 to 1:0.2. The composition is useful in a variety of indoor or outdoor sealing applications for sealing, filling or repairing cracks, joints, gaps in concrete, masonry, stone, wood, or other construction materials. Thus, a urethane acrylate was produced by reacting propylene carbonate (Jeffsol PC) with trimethylhexamethylenediamine at a mole ratio of 2:1 for 3 h at 80°, followed by reacting with methacrylic anhydride for 5.5 h at 105°. The urethane acrylate (5) was used in a foamable photopolymerizable composition containing polyester tetraacrylate CN 292 (43), methacrylate-terminated polybutadiene CN 301 (35), Benacure 651 radical initiator (7), and Perkadox AIBN blowing agent (10%).
IT 42404-50-2P

RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(monomer; urethane acrylate-containing foamable photopolymerizable sealing compns.)

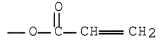
RN 42404-50-2 HCAPLUS

CN 2-Propenoic acid, 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl ester (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM C08J009-00
ICS C08J003-28

INCL 521050500

CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38

IT 42404-50-2P 752243-49-5P 752243-50-8P
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(monomer; urethane acrylate-containing foamable photopolymerizable sealing compns.)

L33 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2001:603571 HCAPLUS Full-text

DN 135:187533

TI Ultraviolet-curable (meth)acrylic resin composition for optical sheet and the optical sheet

IN Motonaga, Akira; Mizobuchi, Tsukasa; Konami, Yukichi

PA Mitsubishi Rayon Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001226418	A	20010821	JP 2000-35290	200002 14

PRAI JP 2000-35290 20000214

AB The composition contains (meth)acryloyl-containing compound, a UV-sensitive radical polymerization initiator, and a UV absorber which is added so that the cured product shows light transmittance ≤10% at 200-330 nm and ≥30% at 360-400 nm. The optical sheet has lens portions made of the above composition on a substrate. The sheet, suitable for prism sheet in liquid crystal display device back light, fresnel lens, etc., shows good adhesion between the lens portion and the substrate and good discoloration prevention of the lens portion.

IT 355009-90-4P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(UV-curable (meth)acrylic resin composition containing UV-sensitive
polymerization initiator and UV absorber for optical sheet)

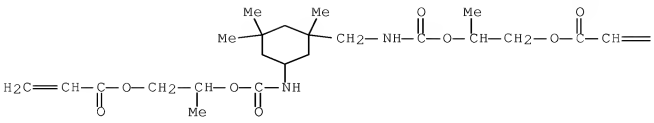
RN 355009-90-4 HCAPLUS

CN 2-Propenoic acid, 2-phenoxyethyl ester, polymer with α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 65801-84-5
CMF C24 H38 N2 O8

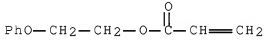
PAGE 1-A



PAGE 1-B

CM 2

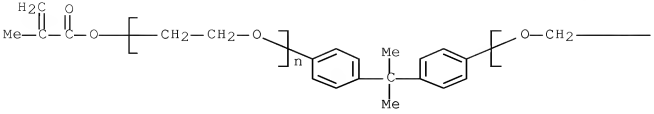
CRN 48145-04-6
CMF C11 H12 O3



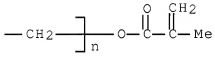
CM 3

CRN 41637-38-1
CMF (C2 H4 O)n (C2 H4 O)n C23 H24 O4
CCI PMS

PAGE 1-A

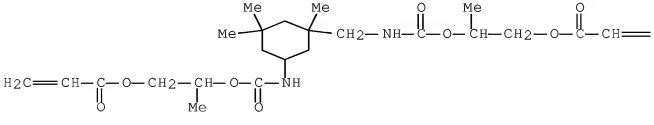


PAGE 1-B



IT 65801-84-5P, Isophorone diisocyanate 2-hydroxypropyl acrylate (1:2) adduct
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(monomer; UV-curable (meth)acrylic resin composition containing UV-sensitive polymerization initiator and UV absorber for optical sheet)
RN 65801-84-5 HCAPLUS
CN 2-Propenoic acid, 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



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IC ICM C08F002-50
ICS B29C039-10; C08F020-00; C08J005-18; G02B001-04; G02B003-06; G02B003-08; G02F001-1335; G03B021-62; B29L011-00; C08L033-00
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38, 74
IT 165455-70-9P, BPE 10-Kayarad R 604-phenoxyethyl acrylate copolymer
355009-90-4P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(UV-curable (meth)acrylic resin composition containing UV-sensitive
polymerization initiator and UV absorber for optical sheet)
IT 65801-84-5P, Isophorone diisocyanate 2-hydroxypropyl acrylate (1:2) adduct
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(monomer; UV-curable (meth)acrylic resin composition containing UV-sensitive polymerization initiator and UV absorber for optical sheet)

L33 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:750347 HCAPLUS Full-text
DN 133:322601
TI Active energy ray-curable composition for optical sheet products
IN Motonaga, Akira; Konami, Yukichi
PA Mitsubishi Rayon Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000297246	A	20001024	JP 1999-106963	19990414
JP 3866443	B2	20070110		

PRAI JP 1999-106963 19990414

AB Title composition comprises (A) 10-70 parts of a urethane (meth)acrylate having >4 (meth)acryloyl group, (B) 10-50 parts of an aliphatic di(meth)acrylate with mol. weight of >500, (C) 0-80 parts of a compound containing polymerizable double bond, and (D)0.01-5 parts of an active energy ray-sensitive radical polymerization initiator. An optical sheet product is obtained by forming a lens on at least one side of a transparent substrate using the above composition

IT 302809-53-6P 302809-54-7P

RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(cured lens; active energy ray-curable composition for optical sheet products)

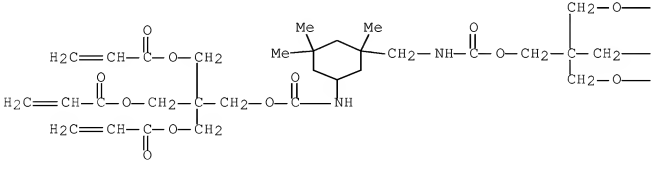
RN 302809-53-6 HCAPLUS

CN 2-Propenoic acid, 1,1'-[2-[[(1-oxo-2-propen-1-yl)oxy]methyl]-2-[[[[[[1,3,3-trimethyl-5-[[[3-[(1-oxo-2-propen-1-yl)oxy]-2,2-bis[[(1-oxo-2-propen-1-yl)oxy]methyl]propoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]methyl]-1,3-propanediyl] ester, polymer with α-(2-methyl-1-oxo-2-propen-1-yl)-ω-[(2-methyl-1-oxo-2-propen-1-yl)oxy]poly(oxy-1,4-butanediyl) and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-propenoate (CA INDEX NAME)

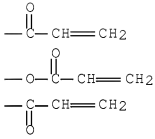
CM 1

CRN 101162-60-1
CMF C40 H54 N2 O16

PAGE 1-A



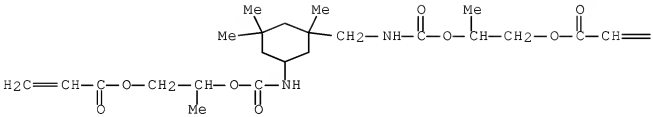
PAGE 1-B



CM 2

CRN 65801-84-5
CMF C24 H38 N2 O8

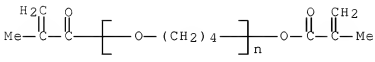
PAGE 1-A



PAGE 1-B

CM 3

CRN 28883-57-0
CMF (C4 H8 O)n C8 H10 O3
CCI PMS

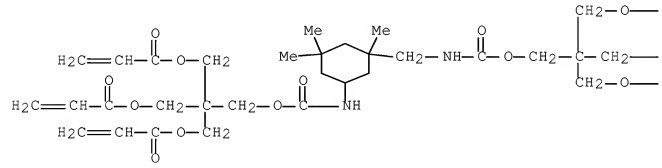


RN 302809-54-7 HCAPLUS
CN 2-Propenoic acid, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,4-butanediyl), 2-[[(1-oxo-2-propenyl)oxy]methyl]-2-[[[[[[1,3,3-trimethyl-5-[[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]methyl]-1,3-propanediyl di-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-propenoate (9CI) (CA INDEX NAME)

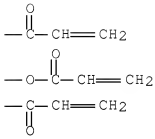
CM 1

CRN 101162-60-1
CMF C40 H54 N2 O16

PAGE 1-A



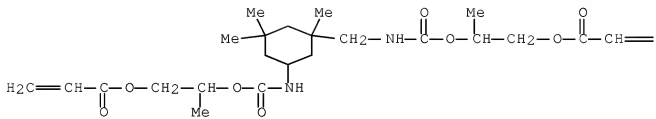
PAGE 1-B



CM 2

CRN 65801-84-5
CMF C24 H38 N2 O8

PAGE 1-A

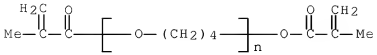


PAGE 1-B

CM 3

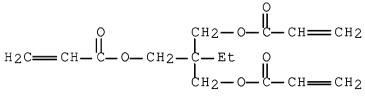
CRN 28883-57-0

CMF (C4 H8 O)n C8 H10 O3
CCI PMS



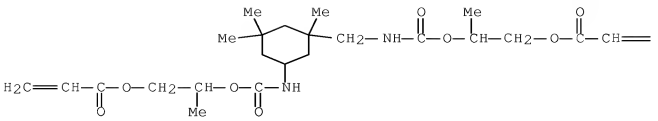
CM 4

CRN 15625-89-5
CMF C15 H20 O6



IT 65801-84-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of active energy ray-curable composition for optical sheet products)
RN 65801-84-5 HCAPLUS
CN 2-Propenoic acid, 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

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IC ICM C09D175-04
ICS C08F002-46; C08F290-06; C09D005-00; G02B001-04; G02B003-00; G02B005-04
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38
IT 302809-52-5P 302809-53-6P 302809-54-7P
302809-55-8P 302809-56-9P 302809-57-0P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(cured lens; active energy ray-curable composition for optical sheet
products)
IT 65801-84-5P 101162-60-1P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of active energy ray-curable composition for optical sheet
products)

L33 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:518621 HCAPLUS Full-text
DN 131:158928
TI Articles covered with wear-, scratch-, heat-, chemical-, and weather-resistant coatings having compositional gradients and their manufacture
IN Fukushima, Hiroshi; Tamura, Misao; Yano, Kazuhisa; Okamoto, Kazuo;

Fukushima, Yoshiaki; Tani, Masaaki; Kito, Osamu; Nagai, Takayuki; Mizutani, Katsuya

PA Mitsubishi Rayon Co., Ltd., Japan; Toyota Central Research and Development Laboratories, Inc.; Toyoda Tsusho K. K.; Toyota Motor Corp.

SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11221880	A	19990817	JP 1998-307140	19981028
	JP 3502279	B2	20040302		
PRAI	JP 1997-295613	A	19971028		

AB The title coatings with good durability and adhesion onto substrate, are formed from compns. containing (A) 5-95 parts laminar hybrid substances with covalent bonds between organic layers formed by hydrolytic condensation of organoalkoxysilanes and inorg. crystals having center metals selected from Mg, Al, Ni, Co, Cu, Mn, Fe, Li, V, Zr, Ca, Y, Ga, In, Tl, Sb, Rh, Ru, Pd, Sn, Zn, Pb, and Ce and (B) 5-95 parts (meth)acryloyloxy group-containing compds. The coatings have continuous or laminar gradient compositional ratio of (A) and (B) from the substrate sides to the atmospheric sides. The coatings are manufactured by coating substrates with compns. containing (A), (B), and (C) 0.1-10 parts active energy ray-sensitive radical polymerization initiators, heating the coatings to form compositional gradients of (A) and (B), and irradiating the coatings with energy ray. Thus, 49.6 parts 3-methacryloyloxypropyltrimethoxysilane and 2.03 parts MgCl2.6H2O were mixed at alkaline pH to obtain a hybrid polymer, 45 parts of which was mixed with urethane diacrylate (manufactured from IPDI and 2-hydroxypropyl acrylate) 15, 1,6-hexanediol diacrylate 55, Irgacure 184 (1-hydroxycyclohexyl Ph ketone) 3, Tinuvin P (UV absorber) 8, and solvent 190 parts to obtain a composition The composition was applied on Lexan LS 2 (polycarbonate plate) and irradiated with a high-pressure Hg lamp to give a coating showing haze 11.9 after 500 cycle in Taber wear test, good adhesion, and good resistance to hot water, chems. (Me2CO, PhMe, NaOH, H2SO4), and weather.

IT 237738-03-3
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(articles covered with wear-, scratch-, heat-, chemical-, and weather-resistant coatings having compositional gradients of

inorg.-organic hybrid Si polymers and acrylic resins)

RN 237738-03-3 HCAPLUS

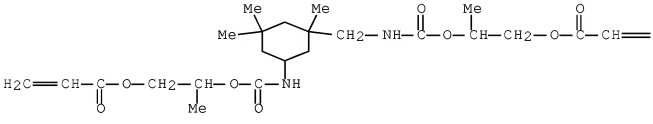
CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 65801-84-5

CMF C24 H38 N2 O8

PAGE 1-A

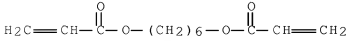


PAGE 1-B

CM 2

CRN 13048-33-4

CMF C12 H18 O4



IC ICM B32B027-00
ICS B05D005-00; B05D007-24; C08F002-48; C08F283-12; C09D004-00
CC 42-10 (Coatings, Inks, and Related Products)
IT 237738-03-3
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(articles covered with wear-, scratch-, heat-, chemical-, and weather-resistant coatings having compositional gradients of inorg.-organic hybrid Si polymers and acrylic resins)

L33 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:1927 HCAPLUS Full-text
DN 126:32683
OREF 126:6611a,6614a
TI Manufacture of plastic lenses with high transparency and good heat and impact resistance
IN Fukushima, Hiroshi; Motonaga, Akira; Morita, Mitsuharu; Makino, Shinji
PA Mitsubishi Rayon Co, Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08258172	A	19961008	JP 1995-68422	199503 27

PRAI JP 1995-68422 19950327

AB The title method involves the following steps; 1st partial polymerization of compns. comprising (A) 20-80 parts ≥2 (meth)acryloyl- containing urethane (meth)acrylates and/or epoxy (meth)acrylates, (B) 10-70 parts ≥2 (meth)acryloyl-containing multifunctional ester-type (meth)acrylates, (C) 5-50 parts monofunctional ester-type mono(meth)acrylates, (D) 0-30 parts vinyl monomers, (E) 0.005-5 parts active energy beam-sensitive radical polymerization initiators, and (F) 0.005-5 parts heat-sensitive radical polymerization initiators by irradiation of active energy beam and 2nd curing by heating. Thus, urethane dimethacrylate of isophorone diisocyanate and 2-hydroxypropyl methacrylate 40, nonabutylene glycol dimethacrylate 30, isobornyl methacrylate 30, 2,4,6-trimethylbenzoyldiphenylpohosphine oxide 0.05, and tert-Bu peroxyisobutyrate 0.1 g were irradiated with UV light and then heated

at 120° to give a test piece showing light transmittance 92% and good chemical, heat, and impact resistance.

IT 134591-00-2P

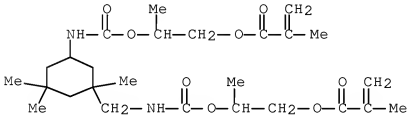
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of plastic lenses with high transparency and good heat
and impact resistance)

RN 184591-00-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,4-butanediyl) and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

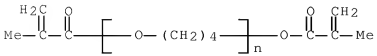
CM 1

CRN 76701-94-5
CMF C26 H42 N2 O8



CM 2

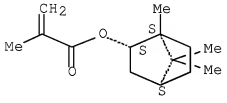
CRN 28883-57-0
CMF (C4 H8 O)n C8 H10 O3
CCI PMS



CM 3

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



IC ICM B29D011-00
ICS C08F290-06; C08J005-00; G02B001-04
ICI B29K033-00, C08L033-06
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35
IT 184591-00-2P 184591-02-4P 184591-03-5P 184591-04-6P
184591-06-8P 184591-07-9P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of plastic lenses with high transparency and good heat
and impact resistance)

STRUCTURES 2 AND 3, CLAIM 3 AND STRUCTURE I FROM CLAIM 3

=> d l34 1-15 bib abs hitstr hitind
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:Y

L34 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:914224 HCAPLUS Full-text
DN 149:180294
TI Plastic film-based transparent electrode substrate for solar cells

IN Katsuma, Katsuhiko; Hayakawa, Seiichiro
PA Nippon Synthetic Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 22pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2008177549	A	20080731	JP 2007-317225	20071207
PRAI JP 2006-345437	A	20061222		

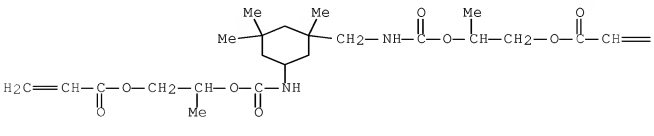
AB The transparent elec. conductive substrate contains substrate having thereon a plastic film (I), a texture (projections and protrusions) layer (II) prepared by curing of photocurable compns., and a metal oxide layer (III) in the order of I/II/III. Preferably, the photocurable compns. contain polyfunctional (meth)acrylates and photopolymn. initiators. Preferably, the resin film (I) comprises a poly(vinyl alc.)-based film. Preferably, a gas-barrier layer with thickness 5-500 nm, based on SiO2 or Si3N4, is provided on at least one surface of a I/II laminate.

IT 1040373-96-3P
RL: IMF (Industrial manufacture); PREP (Preparation)
(photocured layer; plastic film-based transparent electrode substrate for solar cells)
RN 1040373-96-3 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

CM 1

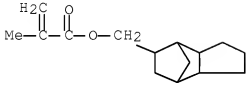
CRN 65801-84-5
CMF C24 H38 N2 O8

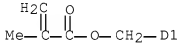
PAGE 1-A



CM 2

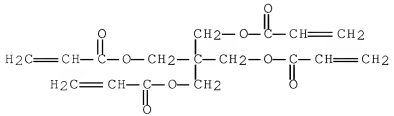
CRN 43048-08-4
CMF C20 H28 O4
CCI IDS





CM 3

CRN 4986-89-4
CMF C17 H20 O8



CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
IT 1040373-96-3P
RL: IMF (Industrial manufacture); PREP (Preparation)
(photocured layer; plastic film-based transparent electrode substrate for solar cells)

L34 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:907829 HCAPLUS Full-text
DN 147:236461
TI Flexible and heat-resistant plastic sheet, its manufacture, and gas-barrier film, transparent conductive film, and display substrate using it
IN Katsuma, Katsuhiko; Hayakawa, Seiichiro; Nomura, Fumie
PA Nippon Synthetic Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 27pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2007204736	A	20070816	JP 2006-351457	200612 27
PRAI JP 2006-483	A	20060105		

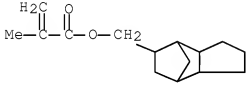
OS MARPAT 147:236461
AB The invention relates to a plastic sheet, manufactured by photocuring of photopolymerizable compns., showing thickness 50-300 μm, Tg ≥200°, flexural modulus at 30° 3.0-4.5 GPa, and no breaking in a bending test (JIS K 5600-5-1:1999, using a mandrel with diameter 10 mm, bending time 2 s, sample size 100 + 50 mm). Thus, a composition comprising isophorone diisocyanate-pentaerythritol triacrylate (1:2) adduct, tricyclodecyl acrylate (FA 513A), and bis(hydroxymethyl)tricyclo[5.2.1.02,6]decane dimethacrylate (DCP) was cast on a support and UV-irradiated to give a film showing flexural modulus 3.88 GPa, light transmittance 93%, and reduced discoloration after heating at 200°.
IT 945651-56-9P, 2-Hydroxyethyl acrylate-isophorone diisocyanate (2:1) adduct-FA 513A-NK Ester DCP copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(flexible and heat-resistant plastic sheets for gas-barrier and transparent conductive substrates of displays)

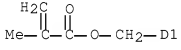
RN 945651-56-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

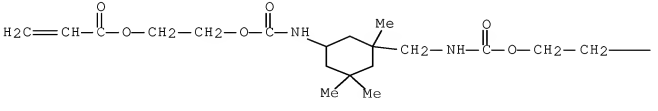


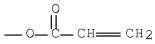


CM 2

CRN 42404-50-2
CMF C22 H34 N2 O8

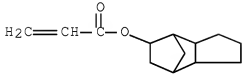
PAGE 1-A





CM 3

CRN 7398-56-3
CMF C13 H18 O2



CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 74
IT 945651-55-8P, Isophorone diisocyanate-pentaerythritol triacrylate (1:2) adduct-FA 513A-NK Ester DCP copolymer 945651-56-9P, 2-Hydroxyethyl acrylate-isophorone diisocyanate (2:1) adduct-FA 513A-NK Ester DCP copolymer 945651-57-0P 945656-80-4P, 2-Isocyanatoethyl acrylate-tricyclodecanedimethanol (2:1) adduct-FA 513A-NK Ester DCP copolymer 945656-81-5P, Norbornanediisocyanatomethyl-pentaerythritol triacrylate (1:2) adduct-FA 513A-NK Ester DCP copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(flexible and heat-resistant plastic sheets for gas-barrier and transparent conductive substrates of displays)

L34 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:253640 HCAPLUS Full-text
DN 146:297238
TI Dimensionally stable, transparent resin articles formed from photopolymerizable compositions, and their use for gas-barrier films, transparent electrically conductive films, and display substrates containing the films

IN Hayakawa, Seiichiro; Katsuma, Katsuhiko; Nomura, Fumie; Maeda, Seiji
PA Nippon Synthetic Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 21pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007056180	A	20070308	JP 2005-245331	20050826

PRAI JP 2005-245331 20050826

AB The transparent resin articles formed by photocuring of photopolymerizable compns., have thickness 50-500 μm and R ≤10%, where R(%) is the deviation of linear thermal expansion coefficient (50-100°) of 5 points ≥5 cm away from each other in the same plane and satisfies the following equation: R(%) = 100 + (Rmax - Rmin)/Rave (Rmax and Rmin are the maximum value and the min. value in the 5 points, resp.; Rave is the average value of the 5 points). Thus, a photopolymerizable composition containing DCP [bis(hydroxy)tricyclo[5.2.1.02,6]decane dimethacrylate] 60, A-TMMT (pentaerythritol triacrylate) 20, a hexafunctional urethane acrylate (prepared from isophorone diisocyanate and pentaerythritol triacrylate) 20, and Irgacure 184 2 parts was UV-cured in a mold and heated to give a molding (150 mm + 150 mm + 0.2 mm) showing transmittance 92%, Tg 300°, linear thermal expansion coefficient 45 ppm/°, R 3%, water absorption (after 24-h immersion in water at 23° after drying) 0.7%, thickness accuracy 10%, and retardation (at 25°) 0.4 mm. SiO2 films were formed by sputtering on both sides of the molding to give a gas-barrier film, which was coated with a urethane acrylate composition to form a hard coating on one side and coated with ITO on the other side to give a transparent elec. conductive film showing surface resistivity 20 Ω/.box..

IT 928215-67-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dimensionally stable, transparent, photocured (meth)acrylate polymer articles for gas-barrier films, transparent elec. conductive films, and display substrates)

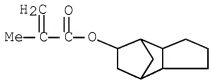
RN 928215-67-2 HCAPLUS

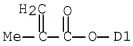
CN 2-Propenoic acid, 2-methyl-, 1,1'-(octahydro-4,7-methano-1H-indene-5,?-diyl) ester, polymer with 1,1'-[2,2-bis[[(1-oxo-2-propen-1-yl)oxy]methyl]-1,3-propanediyl] di-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]pr

opyl 2-propenoate (CA INDEX NAME)

CM 1

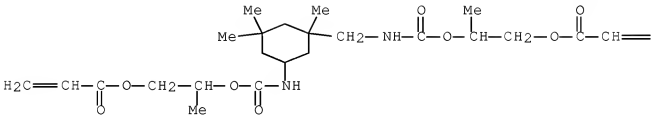
CRN 107293-48-1
CMF C18 H24 O4
CCI IDS





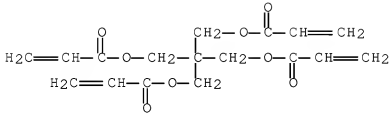
CM 2

CRN 65801-84-5
CMF C24 H38 N2 O8



CM 3

CRN 4986-89-4
CMF C17 H20 O8



CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73, 74, 76
IT 928215-66-1P 928215-67-2P 928215-68-3P 928215-69-4P
928215-70-7P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dimensionally stable, transparent, photocured (meth)acrylate polymer articles for gas-barrier films, transparent elec. conductive films, and display substrates)

L34 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:83716 HCAPLUS Full-text
DN 146:164007
TI Radially polymerizable and curable compositions, resins thereof, molded products, and optical parts
IN Kawasaki, Noboru; Imai, Masao; Otsuji, Atsuo
PA Mitsui Chemicals Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 23pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2007016065	A	20070125	JP 2005-196121	

PRAI JP 2005-196121 20050705

AB Title compns. comprise (A) H2C:CR1CO(OCH2CH2)mOCH2Q1CH2O(CH2CH2O)mCO C(R1):CH2 (R1 = H, Me; m =0-2; Q1 = dicyclopentanediyl) 30-70, (B) H2C:CR2CO(OCH2CH2)nOQ2 (R2 = H, Me; n = 0-2; Q2 = dicyclopentanyl) or isobornyl (meth)acrylate 30-70, (C) H2C:CR5CO2CH2CR4OCONCH2Q3NCO2 CR4CH2OCOC(R5):CH2 (R4, R5 = H, Me; Q3 = 1,5,5-trimethylcyclohexane-1,3-diyl) 0-20, and (D) other (meth)acrylates 0-20 parts (A + B + C + D = 100 parts), and optionally thermal radical initiators and/or photoradical initiators. Thus, a composition of bis(methacryloyloxymethyl)dicyclopentane (NK Ester DCP) 50, methacryloyoxydicyclopentane (FA 513M) 50, and tert-Bu peroxy-2-ethylhexanoate 0.4 part was degassed and cured between 2 glass sheets at 60-160° for 6 h to give a resin sheet showing transmittance 92%, Tg 180°, flexural modulus 3.5 GPa, H2O absorption 0.15%, and good chemical resistance and curability.

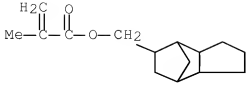
IT 919833-26-4P 919833-28-6P 919833-29-7P
920525-69-5P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radially polymerizable/curable compns. for transparent resins with good heat and water resistance and rigidity)

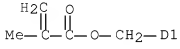
RN 919833-26-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

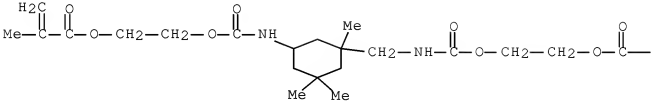




CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

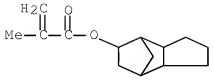
PAGE 1-A



PAGE 1-B

CM 3

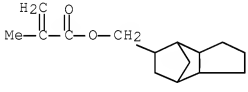
CRN 34759-34-7
CMF C14 H20 O2

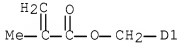


RN 919833-28-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester, polymer with methyl 2-methyl-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

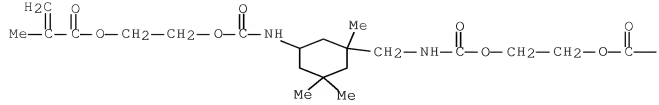




CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

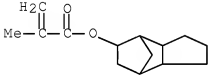
PAGE 1-A



PAGE 1-B

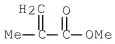
CM 3

CRN 34759-34-7
CMF C14 H20 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2

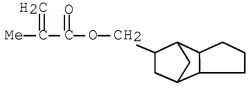


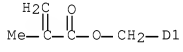
RN 919833-29-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester, polymer with methyl 2-methyl-2-propenoate, rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

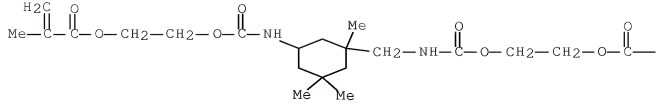




CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A

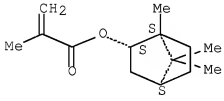


PAGE 1-B

CM 3

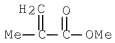
CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



CM 4

CRN 80-62-6
CMF C5 H8 O2

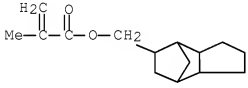


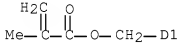
RN 920525-69-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester, polymer with 1,1-dimethylethyl 2-methyl-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

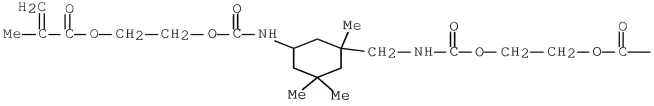




CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

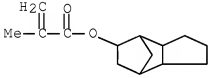
PAGE 1-A



PAGE 1-B

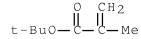
CM 3

CRN 34759-34-7
CMF C14 H20 O2



CM 4

CRN 585-07-9
CMF C8 H14 O2



CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 73
IT 237768-55-7P 919833-26-4P 919833-27-5P
919833-28-6P 919833-29-7P 920525-69-5P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radially polymerizable/curable compns. for transparent resins with good heat and water resistance and rigidity)

L34 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:1228797 HCAPLUS Full-text
DN 145:506333
TI Methacrylic polyurethanes with good light transmittance and heat resistance and low moisture absorption
IN Higuchi, Eisaburo; Sasagawa, Katsuyoshi
PA Nitto Jushi Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2006316189	A	20061124	JP 2005-141289	20050513
PRAI JP 2005-141289		20050513		

AB Title polymers with Tg ≥150°, suitable for optical parts, are manufactured by polymerizing mixts. of (A) urethane dimethacrylates prepared by urethanizing 1 mol alicyclic diisocyanates with 2 mol 2-hydroxypropyl methacrylate (I) or 2-hydroxyethyl methacrylate, (B) tricyclodecanedimethanol dimethacrylate (II), and (C) monofunctional methacrylates, satisfying the relationships of x + y + z = 100, x = 5-90, y = 5-90, and z = 5-35 [x, y, z = content (%) of A, B, and C, resp.]. Thus, a mixture containing IPDI-I adduct (1:2) 40, II 50, and Me methacrylate 10 parts was molded to give a transparent plate showing light transmittance 92%, haze 0.1%, Tg 235°, and water absorption (JIS K 7209) 0.18%.
IT 809241-89-2P 915205-51-5P 915205-52-6P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(methacrylic polymers with good light transmittance and heat resistance and low moisture absorption for optical materials)

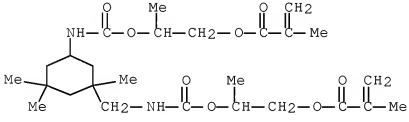
RN 809241-89-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 76701-94-5

CMF C26 H42 N2 O8

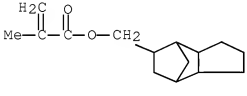


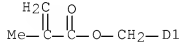
CM 2

CRN 43048-08-4

CMF C20 H28 O4

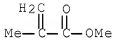
CCI IDS





CM 3

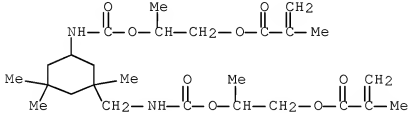
CRN 80-62-6
CMF C5 H8 O2



RN 915205-51-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

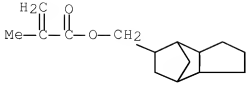
CM 1

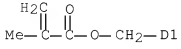
CRN 76701-94-5
CMF C26 H42 N2 O8



CM 2

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

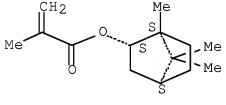




CM 3

CRN 7534-94-3
CMF C14 H22 O2

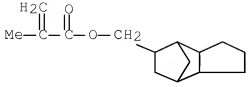
Relative stereochemistry.

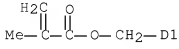


RN 915205-52-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

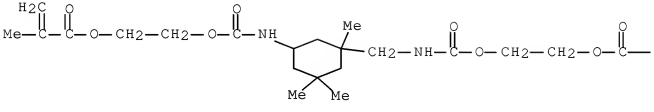




CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

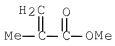
PAGE 1-A



PAGE 1-B

CM 3

CRN 80-62-6
CMF C5 H8 O2

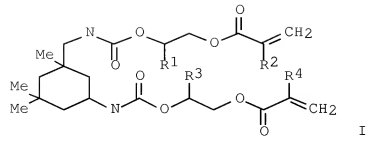


CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT 809241-89-2P 915205-50-4P 915205-51-5P
915205-52-6P 915205-88-8P 915205-89-9P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(methacrylic polymers with good light transmittance and heat resistance and low moisture absorption for optical materials)

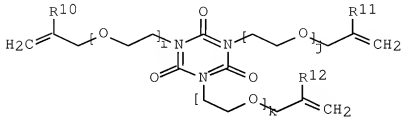
L34 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:977100 HCAPLUS Full-text
DN 145:357926
TI Curable compositions, heat-resistant transparent resins, and optical parts
IN Kawasaki, Noboru; Otsuji, Atsuo
PA Mitsui Chemicals Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 28pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006249220	A	20060921	JP 2005-66890	20050310
PRAI JP 2005-66890		20050310		

GI



I



II

AB The compns. comprise (A) IPDI derivs. I (R1-4 = H, Me), (B) compds. selected from EtC[CH2O(CH2CH2O)dCOC(R5):CH2]3 (R5 = H, Me; d = 0-2), O[CH2CEt[CH2O(CH2CH2O)eCOC(R6):CH2][CH2O(CH2CH2O)fCOC(R7):CH2]]2 (R6, R7 = H, Me; e, f = 0-2), C[CH2O(CH2CH2O)gCOC(R8):CH2]4 (R8 = H, Me; g = 0-2), O[CH2CH2[CH2O(CH2CH2O)hCOC(R9):CH2]3]2 (R9 = H, Me; h = 0-2), and (meth)acryloyl group-containing isocyanurates II (R10-12 = H, Me; i, j, k = 1-2), (C) Me methacrylate or/and its syrup, and (D) radical polymerization initiators. Thus, 1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane (preparation described) 40, trimethylolpropane triacrylate (Light Acrylate TMP-A) 35, Me methacrylate 15, isobornyl methacrylate (Acryester IBX) 10, Perbutyl O 0.1, and Perbutyl L 0.2 part were blended, degassed, and cast-molded at 50° for 4 h and 140° for 12 h to give a product showing total light transmittance 92%, haze 0.2%, Tg 181°, pencil hardness 4H, flexural modulus 3.5 GPa, water absorption 0.65%, and good chemical resistance.

IT 909905-87-9P, FA 513M-Light Ester TMP-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-88-0P, Aronix M 315-FA 513A-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-90-4P, NK Ester A-DPH-methyl methacrylate-NK Ester DCP-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-

yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable (meth)acrylate compns. for heat-resistant transparent resins for optical parts)

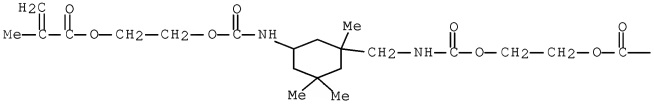
RN 909905-87-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyl-2-[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with methyl 2-methyl-2-propenoate, octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

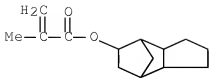
PAGE 1-A



PAGE 1-B

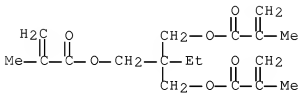
CM 2

CRN 34759-34-7
CMF C14 H20 O2



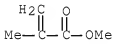
CM 3

CRN 3290-92-4
CMF C18 H26 O6



CM 4

CRN 80-62-6
CMF C5 H8 O2



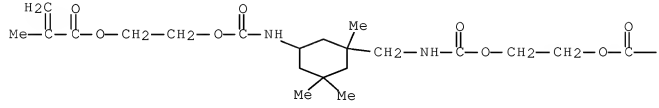
RN 909905-88-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-propenoate, 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate and (2,4,6-trioxo-1,3,5-triazine-

1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

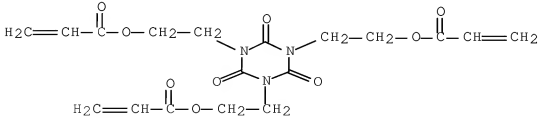
PAGE 1-A



PAGE 1-B

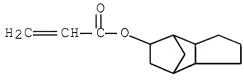
CM 2

CRN 40220-08-4
CMF C18 H21 N3 O9



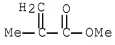
CM 3

CRN 7398-56-3
CMF C13 H18 O2



CM 4

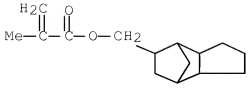
CRN 80-62-6
CMF C5 H8 O2

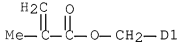


RN 909905-90-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with methyl 2-methyl-2-propenoate, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

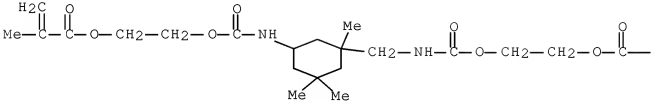




CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A

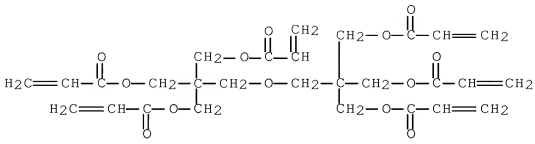


PAGE 1-B

CM 3

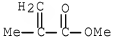
CRN 29570-58-9

CMF C28 H34 O13



CM 4

CRN 80-62-6
CMF C5 H8 O2



CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73

IT 909905-86-8P, Acryester IBX-Light Acrylate TMP-A-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer 909905-87-9P, FA 513M-Light Ester TMP-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-88-0P, Aronix M 315-FA 513A-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-89-1P, Blemmer CHMA-Light Ester TMP-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-90-4P, NK Ester A-DPH-methyl methacrylate-NK Ester DCP-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-

methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 910048-60-1P, Blemmer CHMA-CX 1033-methyl methacrylate-pentaerythritol tetramethacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 910048-61-2P, Ditrimethylolpropane tetramethacrylate-Light Acrylate IBX-A-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer 910048-62-3P, Light Acrylate PE 4A-methyl methacrylate-tetradecyl acrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable (meth)acrylate compns. for heat-resistant transparent resins for optical parts)

L34 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:777737 HCAPLUS Full-text
DN 145:357130
TI Hydrogen bonding and rate enhancement in the photoinduced polymerization of telechelic urethane methacrylates based on a cycloaliphatic system: tricyclodecane dimethanol
AU Deepak, V. D.; Rajan, J.; Asha, S. K.
CS Polymer Science Division, Regional Research Laboratory, Thiruvananthapuram, 695019, India
SO Journal of Polymer Science, Part A: Polymer Chemistry (2006), 44(15), 4384-4395
CODEN: JPACEC; ISSN: 0887-624X
PB John Wiley & Sons, Inc.
DT Journal
LA English
AB A new class of telechelic urethane methacrylic crosslinkers, based on a cycloaliph. system (tricyclodecane dimethanol and tricyclodecane monomethanol), was synthesized. The synthesis was achieved by a two-step condensation of 1,6-hexamethylene diisocyanate or isophorone diisocyanate with tricyclodecane dimethanol and capping with hydroxyethyl methacrylate. Samples of hexanediol diacrylate, tricyclodecane monomethacrylate, and tricyclodecane dimethacrylate were used as non-hydrogen-bonding monomers for comparative studies of the curing kinetics. The photopolymn. of these telechelic systems was investigated with UV irradiation in the presence of 2,2-diethoxy acetophenone as the photoinitiator, and the kinetics were followed by the monitoring of the double-bond conversion at 815 cm-1 with Fourier transform IR spectroscopy. The hydrogen-bonded crosslinkers had higher double-bond conversions than their non-hydrogen-bonded

counterparts under identical conditions. The higher cure rate could be explained by hydrogen-bonding preassocn. in these systems, which brought the methacrylate double bonds within close proximity. The temperature effects on the hydrogen bonding were also investigated. A decrease in the extent of the double-bond conversion with increasing temperature was observed for the hydrogen-bonded crosslinker, in contrast to an increased conversion with temperature for hexanediol diacrylate and tricyclodecane dimethacrylate. This was directly indicative of a reduction of hydrogen bonding at elevated temps. leading to lower conversions.

IT 910555-53-2P

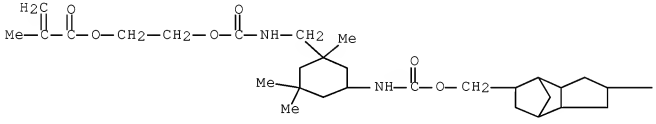
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

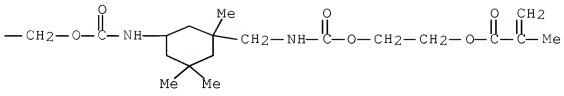
(preparation of telechelic urethane methacrylates based on tricyclodecane dimethanol and hydrogen bonding and rate enhancement in photoinduced polymerization)

RN 910555-53-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[[[[[1,3,3-trimethyl-5-[[[[octahydro-2-[[[[[3,3,5-trimethyl-5-[[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]oxy]methyl]-4,7-methano-1H-inden-5-yl]methoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl ester (CA INDEX NAME)

PAGE 1-A





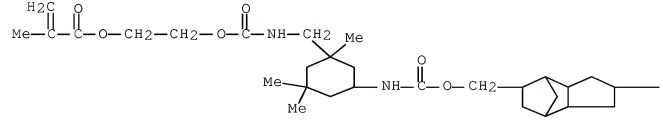
IT 910555-58-7P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of telechelic urethane methacrylates based on tricyclodecane dimethanol and hydrogen bonding and rate enhancement in photoinduced polymerization)

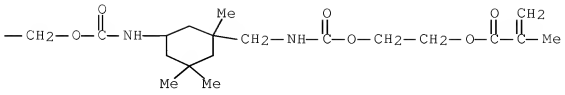
RN 910555-58-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-2,5-diyl)bis[methyleneoxycarbonylimino(1,5,5-trimethyl-3,1-cyclohexanediyl)methyleneiminocarbonyloxy-2,1-ethanediyl] ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 910555-53-2
CMF C48 H76 N4 O12





CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37
IT 95480-51-6P 127823-23-8P 910555-49-6P 910555-51-0P
910555-53-2P 910555-55-4P
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(preparation of telechelic urethane methacrylates based on tricyclodecane dimethanol and hydrogen bonding and rate enhancement in photoinduced polymerization)
IT 820260-77-3P 881029-41-0P 910555-57-6P 910555-58-7P
910555-59-8P 910555-60-1P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation of telechelic urethane methacrylates based on tricyclodecane dimethanol and hydrogen bonding and rate enhancement in photoinduced polymerization)
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:733218 HCAPLUS Full-text
DN 145:198919
TI Photocured (meth)acrylate polymer moldings, their manufacture, and their uses
IN Hayakawa, Seiichiro; Katsuma, Katsuhiko
PA Nippon Synthetic Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006193596	A	20060727	JP 2005-5820	200501 13
PRAI	JP 2005-5820		20050113		

AB The moldings have thickness 50-400 μm and pencil hardness ≥4H. The moldings may be manufactured by photocuring compns. comprising (30-70):(70-30) polyfunctional alicyclic urethane (meth)acrylates and polyfunctional alicyclic (meth)acrylates, and photopolymn. catalysts using ≤5 J/cm2 active energy with wavelength 200-400 nm. Gas-barrier films, transparent electroconductive films, and organic electroluminescent devices including the moldings are also claimed. The moldings show improved optical and mech. properties.

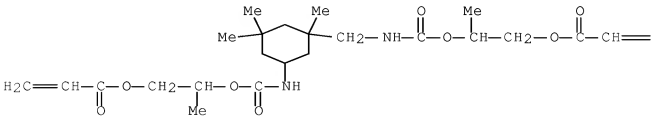
IT 902118-48-3P
RL: DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(manufacture of photocured (meth)acrylate polymer moldings useful for
flexible substrates of organic electroluminescent displays)

RN 902118-48-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-propenoate (9CI) (CA INDEX NAME)

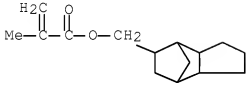
CM 1

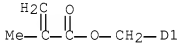
CRN 65801-84-5
CMF C24 H38 N2 O8



CM 2

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS





CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38

IT 3524-68-3DP, Pentaerythritol triacrylate, reaction product with IPDI cyclic trimer, polymers with bis(hydroxymethyl)tricyclo[5.2.1.02,6]decane dimethacrylate 53895-32-2DP, Isophorone diisocyanate cyclic trimer, reaction product with pentaerythritol triacrylate, polymers with bis(hydroxymethyl)tricyclo[5.2.1.02,6]decane dimethacrylate 902118-48-3P 902145-03-3P 902145-05-5P
RL: DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(manufacture of photocured (meth)acrylate polymer moldings useful for

flexible substrates of organic electroluminescent displays)

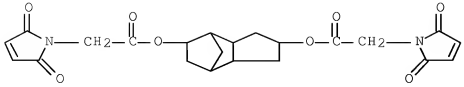
L34 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:563762 HCAPLUS Full-text
DN 143:86821
TI Photocurable polymer sealing compositions showing good heat and moisture resistance, and liquid crystal display panels using them
IN Takeda, Hiroyuki; Kuwana, Yasuhiro; Sakurai, Hiroko; Arai, Hisayoshi
PA Dainippon Ink and Chemicals, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005171135	A	20050630	JP 2003-414729	200312 12
PRAI JP 2003-414729		20031212		

AB The compns. contain photopolymerizable compds. bearing condensed alicyclic structures and maleimide groups, photopolymerizable compds. bearing alicyclic structures and ≥2 (meth)acryloyl groups, and photopolymerizable compds. bearing carboxy and ≥1 (meth)acryloyl groups. The liquid crystal display panels show no decrease of voltage retention.
IT 854763-26-1P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(photocurable polymer sealing compns. showing good heat and moisture resistance for liquid crystal display panels)
RN 854763-26-1 HCAPLUS
CN 1H-Pyrrole-1-acetic acid, 2,5-dihydro-2,5-dioxo-, octahydro-4,7-methano-1H-indene-2,5-diyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-propenoate, 3-(trimethoxysilyl)propyl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

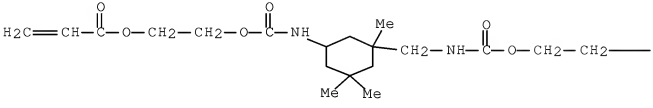
CRN 854736-94-0
CMF C22 H22 N2 O8



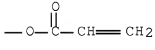
CM 2

CRN 42404-50-2
CMF C22 H34 N2 O8

PAGE 1-A

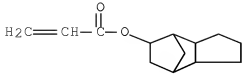


PAGE 1-B



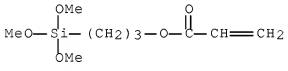
CM 3

CRN 7398-56-3
CMF C13 H18 O2



CM 4

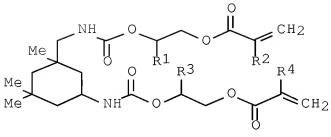
CRN 4369-14-6
CMF C9 H18 O5 Si



IC ICM C08F222-40
ICS C08F220-18; G02F001-1339
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 24, 27, 35, 42
IT 854763-26-1P 855527-93-4P 855527-94-5P 855527-95-6P 855527-97-8P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(photocurable polymer sealing compns. showing good heat and moisture resistance for liquid crystal display panels)

L34 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:1080946 HCAPLUS Full-text
DN 142:57311
TI Crosslinkable methacrylic resin composition and transparent member
IN Kogo, Osamu; Kawasaki, Noboru; Enna, Masahiro
PA Mitsui Chemicals, Inc., Japan
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004108778	A1	20041216	WO 2004-JP8404	20040609
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1632507	A1	20060308	EP 2004-745953	200406 09
	R: DE, FR, GB, IT				
	CN 1784433	A	20060607	CN 2004-80012529	200406 09
	EP 1867665	A2	20071219	EP 2007-18901	200406 09
	EP 1867665	A3	20080402		
	R: DE, FR, GB, IT				
	KR 749004	B1	20070813	KR 2005-723210	200512 02
	US 20060155085	A1	20060713	US 2005-559821	200512 08
	KR 2007030917	A	20070316	KR 2007-701701	200701 24
PRAI	JP 2003-163748	A	20030609		
	JP 2003-360521	A	20031021		
	EP 2004-745953	A3	20040609		
	WO 2004-JP8404	W	20040609		
	KR 2005-723210	A3	20051202		
GI					



I

AB The composition contains (A) a Me methacrylate monomer and/or a syrup thereof, (B) compound I (R1 and R3, and R2 and R4 independently represent H atoms or Me groups), and (C) a radical initiator. This composition enables to obtain a crosslinked methacrylic resin with improved properties such as heat resistance, rigidity, low water absorbency and chemical resistance without deteriorating high transparency of original PMMA. A transparent member and an optical member composed of such a resin are also disclosed.

IT 808741-51-7P 808741-52-8P 808741-53-9P
808741-55-1P 809241-89-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylic resin compns. with good chemical, heat and water resistance for transparent and optical materials)

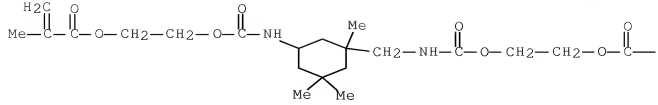
RN 808741-51-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

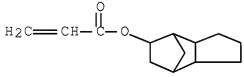
PAGE 1-A



PAGE 1-B

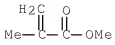
CM 2

CRN 7398-56-3
CMF C13 H18 O2



CM 3

CRN 80-62-6
CMF C5 H8 O2

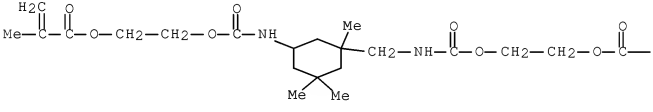


RN 808741-52-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

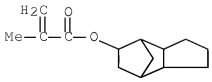
PAGE 1-A



PAGE 1-B

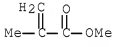
CM 2

CRN 34759-34-7
CMF C14 H20 O2



CM 3

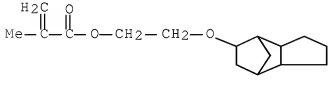
CRN 80-62-6
CMF C5 H8 O2



RN 808741-53-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-[(octahydro-4,7-methano-1H-inden-5-yl)oxy]ethyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

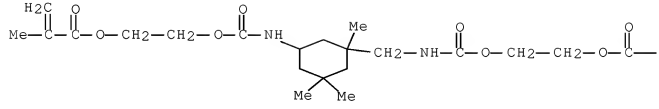
CRN 88449-54-1
CMF C16 H24 O3



CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

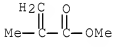
PAGE 1-A



PAGE 1-B

CM 3

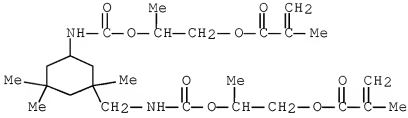
CRN 80-62-6
CMF C5 H8 O2



RN 808741-55-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

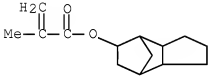
CM 1

CRN 76701-94-5
CMF C26 H42 N2 O8



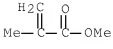
CM 2

CRN 34759-34-7
CMF C14 H20 O2



CM 3

CRN 80-62-6
CMF C5 H8 O2



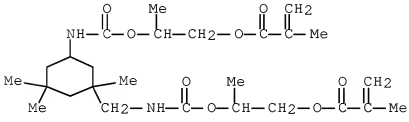
RN 809241-89-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 76701-94-5

CMF C26 H42 N2 O8

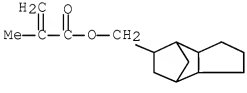


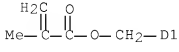
CM 2

CRN 43048-08-4

CMF C20 H28 O4

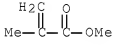
CCI IDS





CM 3

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08F220-14
ICS C08F220-36
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT 808741-48-2P 808741-49-3P 808741-50-6P 808741-51-7P
808741-52-8P 808741-53-9P 808741-54-0P
808741-55-1P 808741-56-2P 808741-57-3P 808741-58-4P
808741-59-5P 809241-89-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylic resin compns. with good chemical, heat and water resistance for transparent and optical materials)
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

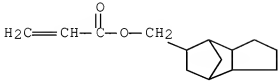
L34 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:784229 HCAPLUS Full-text
DN 128:89848
OREF 128:17543a,17546a
TI Photocurable resin compositions containing polyfunctional urethane (meth)acrylates and molds obtained from them
IN Matsumura, Norio; Kasuda, Yuichi; Watanabe, Takeshi; Ukaji, Takashi
PA Japan Synthetic Rubber Co., Ltd., Japan; Nippon Tokushu Coating K. K.; JSR Ltd.
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

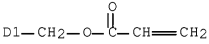
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09316113	A	19971209	JP 1996-137027	

199605
30
JP 3650216 B2 20050518
US 5874041 A 19990223 US 1997-865781
199705
30
PRAI JP 1996-137027 A 19960530
AB The compns., giving cured products with heat distortion temperature ≥80°, contain (A) monomers containing 20-80% polyfunctional urethane (meth)acrylates (H2C:CR1CO2R2OCONH)nR3 (R1 = H, Me; R2 = C2-10 divalent hydrocarbon; R3 = C2-20 2-6-valent organic group; n = 2-6) with Mn ≤1000, and 20-80% ethylenically unsatd. monomers having cyclic structures and ≥1 ethylenically unsatd. linkage (glass transition temperature of their homopolymers ≥50°), (B) photopolymn. initiators, and (C) 100-160 volume parts (based on 100 volume parts other components) inorg. fillers with average grain size or fiber length 1-50 μm. The moldings having several laminated cured resin layers are manufactured by repeating selective light irradiation to the above compns. Thus, 100 g tricyclodecanediyldimethylene diacrylate and 171.4 g 2,4-TDI were reacted with 228.6 g 2-hydroxyethyl acrylate at in the presence of 1.56 g dibutyltin laurate and 0.65 g 2,6-di-tert-butyl-4- methylphenol at 15-35° for 1 h and at 50-60° for 6 h to give a polyfunctional acrylate/tricyclodecanediyldimethylene diacrylate 40:10 mixture, 50 parts of which was reacted with 25 parts tricyclo[5,2,1,02,6]decanyl acrylate and 25 parts N-vinylpyrrolidone at 50° for 2 h in the presence of 1 part 1-hydroxyphenyl ketone and mixed with 340 parts GB 045ZC (glass beads) to give a gray-colored slurry with viscosity 15,000 cP, Young's modulus in flexure of its cured product 700 kg/cm2, and heat-distortion temperature of the cured product 150°. A mold obtained from the composition showed good dimensional stability and durability in repeated use.
IT 200719-68-2P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable resin compns. containing polyfunctional urethane (meth)acrylates for molds)
RN 200719-68-2 HCAPLUS
CN 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with 1-ethenylhexahydro-2H-azepin-2-one, 4-(1-oxo-2-propenyl)morpholine and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42594-17-2
CMF C18 H24 O4
CCI IDS

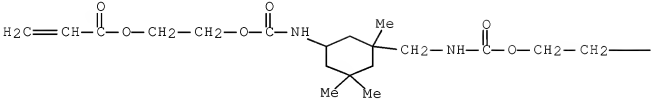




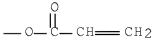
CM 2

CRN 42404-50-2
CMF C22 H34 N2 O8

PAGE 1-A

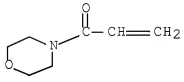


PAGE 1-B



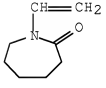
CM 3

CRN 5117-12-4
CMF C7 H11 N O2



CM 4

CRN 2235-00-9
CMF C8 H13 N O



IC ICM C08F002-48
ICS B29C033-40; C08F002-44; C08F020-36; G03F007-004; G03F007-027; C09D004-02
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37
IT 200719-65-9P 200719-66-0P 200719-67-1P 200719-68-2P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photocurable resin compns. containing polyfunctional urethane (meth)acrylates for molds)

L34 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1994:90995 HCAPLUS Full-text
DN 120:90995

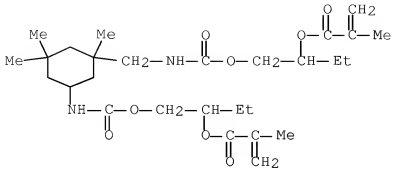
OREF 120:16029a,16032a
TI Optical data recording medium and manufacturing method thereof
IN Koyama, Eiji; Gotoh, Akira; Nakamichi, Shuhei; Sudo, Ryoichi; Miwa, Hiroaki
PA Hitachi Maxell, Ltd., Japan; Hitachi, Ltd.
SO U.S., 35 pp. Cont of U.S. Ser. No. 433,340, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5234792	A	19930810	US 1992-928650	19920817
PRAI JP 1988-281444	A	19881109		
JP 1988-285092	A	19881111		
JP 1988-326023	A	19881226		
US 1989-433340	B1	19891108		

AB The optical data recording medium comprises at least a transparent substrate, a transferred layer of a preformat pattern formed on the transparent substrate and a thin film layer formed on the transferred layer where at least the surface of the transferred layer in contact with the transparent substrate is made of a resin layer composed of an UV ray curable resin resulting in an optical data recording medium having a reduced moisture absorbing quality of the transferred layer and the ratio of swelling is restricted to ≤0.1%. The medium has high reliability and a large capacity and prevents moisture absorption and swelling of a resin layer formed on one side of a transparent substrate. The method of manufacturing is also claimed.
IT 152190-97-1
RL: USES (Uses)
(optical recoding material with under layer from, for reduced moisture absorption)
RN 152190-97-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1-[[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]butoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]methyl]propyl ester, polymer with (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) di-2-propenoate (9CI) (CA INDEX NAME)

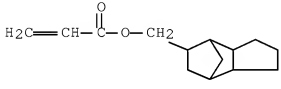
CM 1

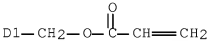
CRN 152190-92-6
CMF C28 H46 N2 O8



CM 2

CRN 42594-17-2
CMF C18 H24 O4
CCI IDS





IC ICM G03C001-72
ICS G11B007-24
INCL 430270000
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT 6701-13-9D, polymers with diacrylates 13675-34-8D, polymers with diacrylates 16868-12-5D, polymers with di(meth)acrylates 152190-93-7 152190-95-9 152190-96-0 152190-97-1 152190-98-2 152191-02-1 152191-03-2 152191-04-3 152191-06-5
RL: USES (Uses)
(optical recoding material with under layer from, for reduced

moisture absorption)

L34 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1992:46351 HCAPLUS Full-text
DN 116:46351
OREF 116:7893a,7896a
TI Composition for plastic lenses
IN Fukushima, Hiroshi; Motonaga, Akira; Suda, Eriko; Nakajima, Mikito; Takeshita, Katsuyoshi; Kutsukake, Yusuke
PA Mitsubishi Rayon Co., Ltd., Japan; Seiko Epson Corp.
SO Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 441383	A2	19910814	EP 1991-101703	19910207
	EP 441383	A3	19920415		
	EP 441383	B1	19960508		
	R: DE, FR, GB, NL				
	JP 03231908	A	19911015	JP 1990-27118	19900208
	JP 2726325	B2	19980311		
	JP 03239711	A	19911025	JP 1990-36148	19900219
	JP 2760624	B2	19980604		
	JP 04065406	A	19920302	JP 1990-176223	19900705
	JP 2849172	B2	19990120		
	JP 04065407	A	19920302	JP 1990-176224	19900705
	JP 2849173	B2	19990120		
	AU 9170212	A	19910815	AU 1991-70212	19910204
	AU 634338	B2	19930218		
	US 5183870	A	19930202	US 1991-651945	19910207

KR 180745 B1 19990515 KR 1991-2150

199102
08

PRAI JP 1990-27118 A 19900208
JP 1990-36148 A 19900219
JP 1990-176223 A 19900705
JP 1990-176224 A 19900705

AB Plastic lenses having high thermal resistance, high impact resistance, low water absorption, and good moldability comprise (1) 10-60 parts of a polybutylene glycol di(meth)acrylate, (2) 20-80 parts of a urethane poly(meth)acrylate or epoxy poly(meth)acrylate, (3) 5-60 parts of a mono(meth)acrylate, and (4) 0-60 parts of a compound having ≥1 polymerizable double bond. Thus, 35 g of nonabutylene glycol dimethacrylate, 40 g of a urethane dimethacrylate obtained by reacting isophorone diisocyanate with 2-hydroxypropyl methacrylate, 20 g of tricyclo[5.2.1.02,6]decan-8-yl methacrylate, and 5 g of 1,6-hexamethylene glycol dimethacrylate were copolymd. and molded to give a lens. The lenses showed a 92% of visible light transmittance and 1.504 refractive index at 20°.

IT 138393-20-1P 138417-04-6P
RL: PREP (Preparation)
(preparation of, for lenses)

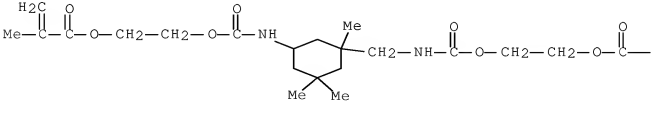
RN 138393-20-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 5,10,15,20,25,30,35,40-octaoxatetratetracontane-1,44-diyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

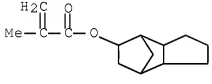
PAGE 1-A



PAGE 1-B

CM 2

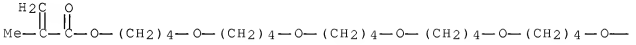
CRN 34759-34-7
CMF C14 H20 O2



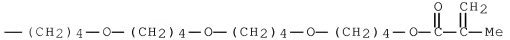
CM 3

CRN 17622-68-3
CMF C44 H82 O12

PAGE 1-A



PAGE 1-B



RN 138417-04-6 HCAPLUS

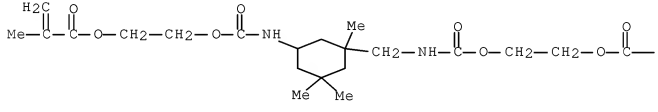
CN 2-Propenoic acid, 2-methyl-, 1,6-hexanediyl ester, polymer with octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate, 5,10,15,20,25,30,35,40-octaoxatetratetracontane-1,44-diyl bis(2-methyl-2-propenoate) and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6

CMF C24 H38 N2 O8

PAGE 1-A

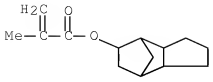


PAGE 1-B

CM 2

CRN 34759-34-7

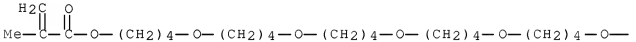
CMF C14 H20 O2



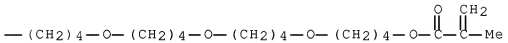
CM 3

CRN 17622-68-3
CMF C44 H82 O12

PAGE 1-A

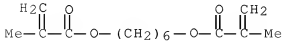


PAGE 1-B



CM 4

CRN 6606-59-3
CMF C14 H22 O4

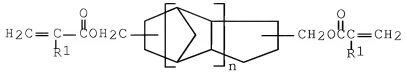


IC ICM G02B001-04
ICS C08F220-28; C08F220-10
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 38
IT 138393-20-1P 138393-22-3P 138393-23-4P 138393-24-5P
138393-25-6P 138393-26-7P 138393-27-8P 138393-28-9P
138393-30-3P 138393-31-4P 138393-32-5P 138393-33-6P
138395-04-7P 138395-05-8P 138417-04-6P 138417-05-7P
138417-06-8P 138417-07-9P 138417-08-0P
RL: PREP (Preparation)
(preparation of, for lenses)

L34 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1989:633891 HCAPLUS Full-text
DN 111:233891
OREF 111:38861a,38864a
TI Transparent (meth)acrylate copolymers for optical use
IN Sudo, Ryoichi; Kobata, Makoto; Miwa, Hiroaki; Tajima, Tetsuo
PA Hitachi Maxell, Ltd., Japan; Hitachi, Ltd.
SO Ger. Offen., 16 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3834956	A1	19890427	DE 1988-3834956	19881013
	DE 3834956	C2	19921029		
	JP 01101316	A	19890419	JP 1987-257221	19871014
	JP 07103195	B	19951108		
	US 4957990	A	19900918	US 1988-257832	19881013
PRAI	JP 1987-257221	A	19871014		

GI



I

AB The title copolymers giving cured products with good heat resistance and strength and low hygroscopicity contain 20-90% (meth)acrylates I (R1 = H, Me; n = 1-6) and 80-10% (meth)acrylates Z3[OCONHZ2NHCO2Z1OCOC(R1):CH2]2 [Z1 = (alkyl)ethylene, Z2 = C6-16-hydrocarbylene, Z3 = C2-300 hydrocarbylene]. Thus, a 50:50 mixture of I (R1 = H, n = 1) and a 1:2:2 adduct of 1,10-decanediol, isophorone diisocyanate, and 2-hydroxybutyl methacrylate was polymerized as a 1.1-mm layer by UV (365 nm, 100 mW/cm2) for 30 s and post cured at 100° to give a copolymer with good processability, heat distortion temperature 155°, impact strength (10-mm steel sphere) 65 cm, and H2O absorption (7 days, 25°) 1.2%.

IT 123878-00-2P

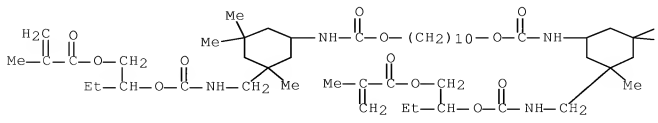
RL: PREP (Preparation)
(transparent and impact-resistant, manufacture of, for optical use)

RN 123878-00-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,10-decanediylbis[oxycarbonylimino(1,5,5-trimethyl-3,1-cyclohexanediyl)methyleneiminocarbonyloxy(2-ethyl-2,1-ethanediyl)] ester, polymer with (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) di-2-propenoate (9CI) (CA INDEX NAME)

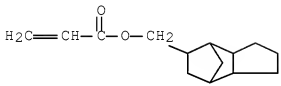
CM 1

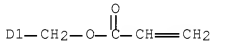
CRN 123787-20-2
CMF C50 H86 N4 O12



CM 2

CRN 42594-17-2
CMF C18 H24 O4
CCI IDS





IC ICM C08F220-28
ICS C08F220-36; B29D011-00; G02B001-04
ICI C08F220-20, C08F220-36
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 73
IT 6606-59-3DP, Hexamethylene methacrylate, polymers with polyalicyclic acrylates and urethane methacrylates 7534-94-3DP, Isobornyl methacrylate, polymers with polyalicyclic acrylates and urethane methacrylates 13048-34-5DP, Decamethylene acrylate, polymers with polyalicyclic acrylates and urethane methacrylates 123786-94-7DP, polymers with urethane methacrylates 123848-66-8DP, polymers with polyalicyclic methacrylates 123848-67-9DP, polymers with polyalicyclic methacrylates 123848-68-0DP, polymers with polyalicyclic methacrylates 123878-00-2P 123878-01-3P

123878-02-4P
RL: PREP (Preparation)
(transparent and impact-resistant, manufacture of, for optical use)

L34 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1988:551616 HCAPLUS Full-text
DN 109:151616
OREF 109:25215a,25218a
TI Photocurable compositions for glass optical fiber secondary coatings
IN Hayama, Kazuhide; Hosokawa, Noritaka; Kato, Hisayoshi
PA Mitsubishi Petrochemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

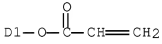
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 63085030	A	19880415	JP 1986-226513	19860925
PRAI JP 1986-226513		19860925		

AB The title compns., providing coatings with Young's modulus >5000 kg/cm2, low-temperature elongation >10%, and low moisture absorption, comprise (A) urethane acrylate from polyol (mol.weight 500-5000), polyisocyanate and OH-containing acrylate, (B) diacrylate from polyisocyanate and OH-containing acrylate, (C) dicyclopentenyl acrylate or benzyl acrylate, (D) N-vinylpyrrolidone, and (E) photoinitiator at A/B weight ratio 0.5-4, (A + B) content 70-90%, (C + D) content 10-30% and D content 0-10%. A urethane acrylate (I) was prepared from 90:10 propylene oxide-ethylene oxide copolymer (mol.weight 2100) 78, TDI 12.9, and 2-hydroxyethyl acrylate (II) 9.1 parts, and a diacrylate (III) was prepared by heating 42.9 parts TDI and 57.1 parts II in the presence of p-HOC6H4OMe at 80° for 4 h. A typical secondary coating composition comprised I 35, III 35, benzyl acrylate 30, and benzyl di-Me ketal 3 parts.
IT 116736-63-1 116736-84-6
RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, photocurable, high-modulus, high low-temperature elongation,
for glass optical fibers)
RN 116736-63-1 HCAPLUS
CN Hexanedioic acid, polymer with 1,4-butanediol, 1,3-diisocyanatomethylbenzene, 3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl 2-propenoate, 2-hydroxyethyl 2-propenoate and

2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

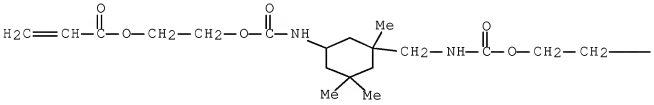
CRN 903574-98-1
CMF C13 H16 O2
CCI IDS



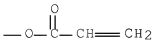
CM 2

CRN 42404-50-2
CMF C22 H34 N2 O8

PAGE 1-A

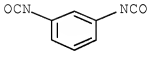


PAGE 1-B



CM 3

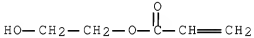
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1—Me

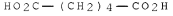
CM 4

CRN 818-61-1
CMF C5 H8 O3



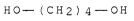
CM 5

CRN 124-04-9
CMF C6 H10 O4



CM 6

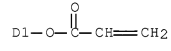
CRN 110-63-4
CMF C4 H10 O2



RN 116736-84-6 HCAPLUS
CN 2-Propenoic acid, 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl ester, polymer with 1-ethenyl-2-pyrrolidinone, 3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-inden-5(or 6)-yl 2-propenoate, α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl), 2-hydroxyethyl 2-propenoate and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

CM 1

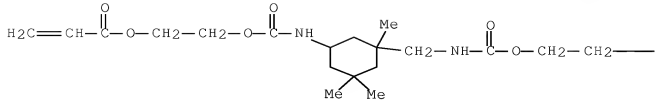
CRN 903574-98-1
CMF C13 H16 O2
CCI IDS



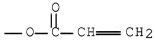
CM 2

CRN 42404-50-2
CMF C22 H34 N2 O8

PAGE 1-A

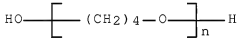


PAGE 1-B



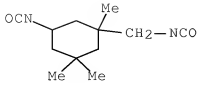
CM 3

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



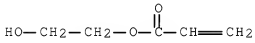
CM 4

CRN 4098-71-9
CMF C12 H18 N2 O2



CM 5

CRN 818-61-1
CMF C5 H8 O3



CM 6

CRN 88-12-0
CMF C6 H9 N O

IC ICM C03C025-02
ICS C09D003-727
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 57
IT 116696-03-8 116736-63-1 116736-34-6
116837-08-2 116837-09-3
RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, photocurable, high-modulus, high low-temperature
elongation,

for glass optical fibers)

STRUCTURE 4, CLAIM 3

=> d l35 1-11 bib abs hitstr hitind
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L35 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2007:83716 HCAPLUS Full-text
DN 146:164007
TI Radially polymerizable and curable compositions, resins thereof, molded products, and optical parts
IN Kawasaki, Noboru; Imai, Masao; Otsuji, Atsuo
PA Mitsui Chemicals Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 23pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007016065	A	20070125	JP 2005-196121	20050705
PRAI JP 2005-196121		20050705		

AB Title compns. comprise (A) H2C:CR1CO(OCH2CH2)mOCH2Q1CH2O(CH2CH2O)mCOC(R1):CH2 (R1 = H, Me; m =0-2; Q1 = dicyclopentanediyl) 30-70, (B) H2C:CR2CO(OCH2CH2)nOQ2 (R2 = H, Me; n = 0-2; Q2 = dicyclopentanyl) or isobornyl (meth)acrylate 30-70, (C) H2C:CR5CO2CH2CR4OCONCH2Q3NCO2CR4CH2OCOC(R5):CH2 (R4, R5 = H, Me; Q3 = 1,5,5-trimethylcyclohexane-1,3-diyl) 0-20, and (D) other (meth)acrylates 0-20 parts (A + B + C + D = 100 parts), and optionally thermal radical initiators and/or photoradical initiators. Thus, a composition of bis(methacryloyloxymethyl)dicyclopentane (NK Ester DCP) 50, methacryloyoxydicyclopentane (FA 513M) 50, and tert-Bu peroxy-2-ethylhexanoate 0.4 part was degassed and cured between 2 glass sheets at 60-160° for 6 h to give a resin sheet showing transmittance 92%, Tg 180°, flexural modulus 3.5 GPa, H2O absorption 0.15%, and good chemical resistance and curability.
IT 919833-29-7P

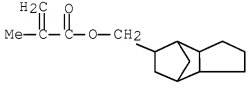
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radially polymerizable/curable compns. for transparent resins with good heat and water resistance and rigidity)

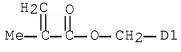
RN 919833-29-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-[(octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene)] ester, polymer with methyl 2-methyl-2-propenoate, rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

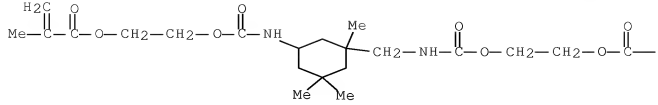




CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A

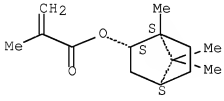


PAGE 1-B

CM 3

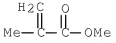
CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



CM 4

CRN 80-62-6
CMF C5 H8 O2



CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 73
IT 237768-55-7P 919833-26-4P 919833-27-5P 919833-28-6P
919833-29-7P 920525-69-5P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radially polymerizable/curable compns. for transparent resins with good heat and water resistance and rigidity)

L35 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:1228797 HCAPLUS Full-text
DN 145:506333
TI Methacrylic polyurethanes with good light transmittance and heat resistance and low moisture absorption
IN Higuchi, Eisaburo; Sasagawa, Katsuyoshi
PA Nitto Jushi Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2006316189	A	20061124	JP 2005-141289	200505 13
PRAI JP 2005-141289		20050513		

AB Title polymers with Tg ≥150°, suitable for optical parts, are manufactured by polymerizing mixts. of (A) urethane dimethacrylates prepared by urethanizing 1 mol alicyclic diisocyanates with 2 mol 2-hydroxypropyl methacrylate (I) or 2-hydroxyethyl methacrylate, (B) tricyclodecanedimethanol dimethacrylate (II), and (C) monofunctional methacrylates, satisfying the relationships of x + y + z = 100, x = 5-90, y = 5-90, and z = 5-35 [x, y, z = content (%) of A, B, and C, resp.]. Thus, a mixture containing IPDI-I adduct (1:2) 40, II 50, and Me methacrylate 10 parts was molded to give a transparent plate showing light transmittance 92%, haze 0.1%, Tg 235°, and water absorption (JIS K 7209) 0.18%.
IT 915265-51-5P

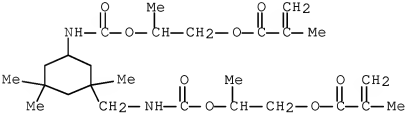
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(methacrylic polymers with good light transmittance and heat resistance and low moisture absorption for optical materials)

RN 915205-51-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

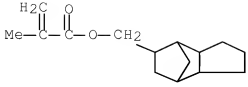
CM 1

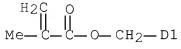
CRN 76701-94-5
CMF C26 H42 N2 O8



CM 2

CRN 43048-08-4
CMF C20 H28 O4
CCI IDS

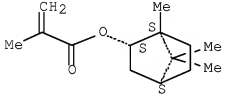




CM 3

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



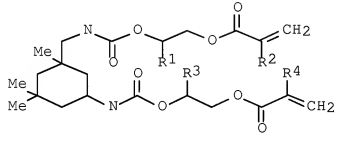
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT 809241-89-2P 915205-50-4P 915205-51-5P 915205-52-6P
915205-88-8P 915205-89-9P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
(methacrylic polymers with good light transmittance and heat resistance and low moisture absorption for optical materials)

L35 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2006:977100 HCAPLUS Full-text
DN 145:357926
TI Curable compositions, heat-resistant transparent resins, and optical parts
IN Kawasaki, Noboru; Otsuji, Atsuo

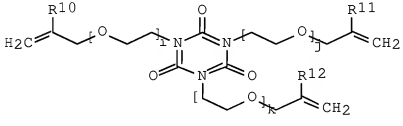
PA Mitsui Chemicals Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 28pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006249220	A	20060921	JP 2005-66890	20050310

PRAI JP 2005-66890 20050310
GI



I



II

AB The compns. comprise (A) IPDI derivs. I (R1-4 = H, Me), (B) compds. selected from EtC[CH2O(CH2CH2O)dCOC(R5):CH2]3 (R5 = H, Me; d = 0-2), O[CH2CEt[CH2O(CH2CH2O)eCOC(R6):CH2][CH2O(CH2CH2O)fCOC(R7):CH2]]2 (R6, R7 = H, Me; e, f = 0-2), C[CH2O(CH2CH2O)gCOC(R8):CH2]4 (R8 = H, Me; g = 0-2), O[CH2CH2[CH2O(CH2CH2O)hCOC(R9):CH2]3]2 (R9 = H, Me; h = 0-2), and (meth)acryloyl group-containing isocyanurates II (R10-12 = H, Me; i, j, k = 1-2), (C) Me methacrylate or/and its syrup, and (D) radical polymerization initiators. Thus, 1,5,5-trimethyl-1-[(2-

methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane (preparation described) 40, trimethylolpropane triacrylate (Light Acrylate TMP-A) 35, Me methacrylate 15, isobornyl methacrylate (Acryester IBX) 10, Perbutyl O 0.1, and Perbutyl L 0.2 part were blended, degassed, and cast-molded at 50° for 4 h and 140° for 12 h to give a product showing total light transmittance 92%, haze 0.2%, Tg 181°, pencil hardness 4H, flexural modulus 3.5 GPa, water absorption 0.65%, and good chemical resistance.

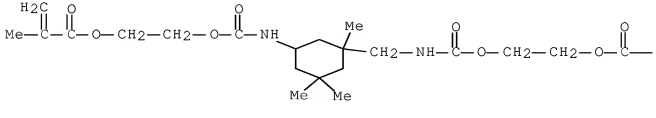
IT 909905-86-8P, Acryester IBX-Light Acrylate TMP-A-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer 910048-61-2P, Ditrimethylolpropane tetramethacrylate-Light Acrylate IBX-A-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable (meth)acrylate compns. for heat-resistant transparent resins for optical parts)

RN 909905-86-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

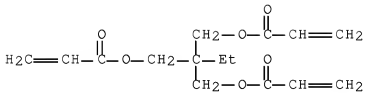
CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8



CM 2

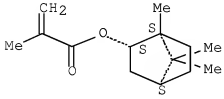
CRN 15625-89-5
CMF C15 H20 O6



CM 3

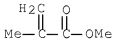
CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



CM 4

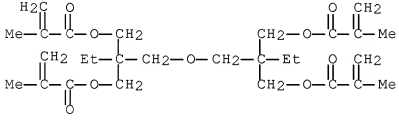
CRN 80-62-6
CMF C5 H8 O2



RN 910048-61-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[[2,2-bis[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl ester, polymer with methyl 2-methyl-2-propenoate, rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

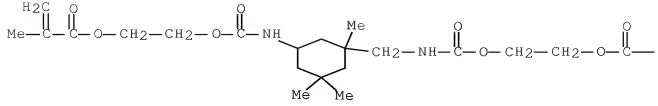
CRN 52733-11-6
CMF C28 H42 O9



CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A

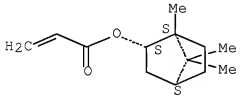


PAGE 1-B

CM 3

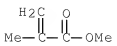
CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.



CM 4

CRN 80-62-6
CMF C5 H8 O2



CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73
IT 909905-86-8P, Acryester IBX-Light Acrylate TMP-A-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer 909905-87-9P, FA 513M-Light Ester TMP-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-88-0P, Aronix M 315-FA 513A-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-89-1P, Blemmer CHMA-Light Ester TMP-methyl methacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 909905-90-4P, NK Ester A-DPH-methyl methacrylate-NK Ester DCP-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 910048-60-1P, Blemmer CHMA-CX 1033-methyl methacrylate-pentaerythritol tetramethacrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer 910048-61-2P, Ditrimethylolpropane tetramethacrylate-Light Acrylate IBX-A-methyl methacrylate-1,5,5-trimethyl-1-[(2-methacryloyloxyethyl)carbamoylmethyl]-3-(2-methacryloyloxyethyl)carbamoylcyclohexane copolymer 910048-62-3P, Light Acrylate PE 4A-methyl methacrylate-tetradecyl acrylate-1,5,5-trimethyl-1-[(1-methacryloyloxypropan-2-yl)carbamoylmethyl]-3-(1-methacryloyloxypropan-2-yl)carbamoylcyclohexane copolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable (meth)acrylate compns. for heat-resistant transparent resins for optical parts)

L35 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:1080946 HCAPLUS Full-text
DN 142:57311
TI Crosslinkable methacrylic resin composition and transparent member
IN Kogo, Osamu; Kawasaki, Noboru; Enna, Masahiro

PA Mitsui Chemicals, Inc., Japan
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004108778	A1	20041216	WO 2004-JP8404	20040609
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1632507	A1	20060308	EP 2004-745953	20040609
	R: DE, FR, GB, IT				
	CN 1784433	A	20060607	CN 2004-80012529	20040609
	EP 1867665	A2	20071219	EP 2007-18901	20040609
	EP 1867665	A3	20080402		
	R: DE, FR, GB, IT				
	KR 749004	B1	20070813	KR 2005-723210	20051202
	US 20060155085	A1	20060713	US 2005-559821	20051208
	KR 2007030917	A	20070316	KR 2007-701701	20070124
PRAI	JP 2003-163748	A	20030609		
	JP 2003-360521	A	20031021		

	EP 2004-745953	A3	20040609
	WO 2004-JP8404	W	20040609
	KR 2005-723210	A3	20051202

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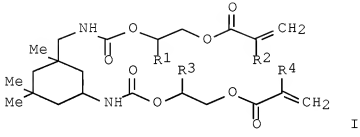


I

AB The composition contains (A) a Me methacrylate monomer and/or a syrup thereof, (B) compound I (R1 and R3, and R2 and R4 independently represent H atoms or Me groups), and (C) a radical initiator. This composition enables to obtain a crosslinked methacrylic resin with improved properties such as heat resistance, rigidity, low water absorbency and chemical resistance without deteriorating high transparency of original PMMA. A transparent member and an optical member composed of such a resin are also disclosed.

IT 808741-54-0P 808741-56-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylic resin compns. with good chemical, heat and water resistance for transparent and optical materials)

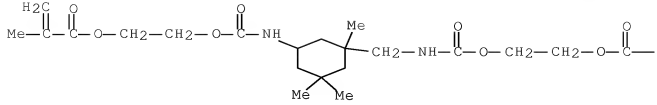
RN 808741-54-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A

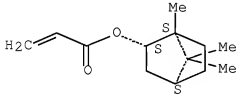


PAGE 1-B

CM 2

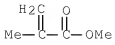
CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.



CM 3

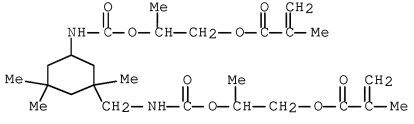
CRN 80-62-6
CMF C5 H8 O2



RN 808741-56-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

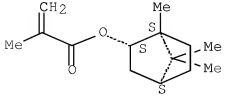
CRN 76701-94-5
CMF C26 H42 N2 O8



CM 2

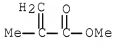
CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



CM 3

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08F220-14
ICS C08F220-36
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT 808741-48-2P 808741-49-3P 808741-50-6P 808741-51-7P
808741-52-8P 808741-53-9P 808741-54-0P 808741-55-1P
808741-56-2P 808741-57-3P 808741-58-4P 808741-59-5P
809241-89-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylic resin compns. with good chemical, heat and water resistance for transparent and optical materials)
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

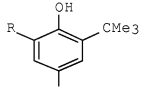
L35 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:271617 HCAPLUS Full-text
DN 138:289083
TI Optical fibers having transparent multilayer resin coatings without yellowing
IN Suzuki, Atsushi; Tanaka, Kazunori; Hattori, Tomoyuki
PA Sumitomo Electric Industries, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 2003104760 A 20030409 JP 2001-302037 200109 28

PRAI JP 2001-302037 20010928

GI



I

AB All the coating layers in the optical fibers contain the same compds. chosen from I (R = C1-6 alkyl but tert-Bu). Thus, an optical fiber having a primary coating layer of polyether diol-isophorone diisocyanate (II) copolymer hydroxyethyl acrylate (III) carbamate, isobornyl acrylate (IV), N-vinylcaprolactam, nonylphenol acrylate, nonanediol diacrylate, and 3,9-bis[2-[3-(3-tert-butyl-4-hydroxy-5-methylphenyl)propionyloxy]- 1,1-dimethylethyl]-2,4,8,10-tetraoxaspiro[5.5]undecane (V) and a secondary coating layer of polyoxyethylene bisphenol A ether-II copolymer III carbamate, polytetramethylene glycol-II copolymer III carbamate, II-III carbamate (1:2), IV, N-vinylpyrrolidone, polyethylene glycol bisphenol A ether diacrylate, and V showed the maximum change of initial yellowness index [ΔYI (D)] 1 after ≤336 h exposure to fluorescent light.

IT 504396-06-9P, 2-Hydroxyethyl acrylate-isobornyl acrylate-isophorone diisocyanate-ethoxylated bisphenol A-ethoxylated bisphenol A diacrylate-PTMG-N-vinyl-2-pyrrolidone-isophorone diisocyanate hydroxyethyl acrylate carbamate (1:2) copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(secondary layers; optical fibers having transparent multilayer resin coatings without yellowing)

RN 504396-06-9 HCAPLUS

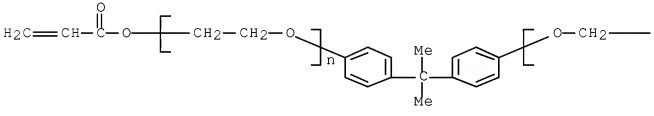
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1-ethenyl-2-pyrrolidinone, α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl), 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-hydroxypoly(oxy-1,2-ethanediyl)],

α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)], rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

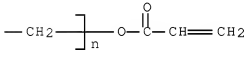
CM 1

CRN 64401-02-1
CMF (C2 H4 O)n (C2 H4 O)n C21 H20 O4
CCI PMS

PAGE 1-A



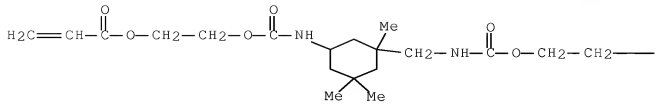
PAGE 1-B



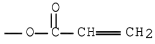
CM 2

CRN 42404-50-2
CMF C22 H34 N2 O8

PAGE 1-A

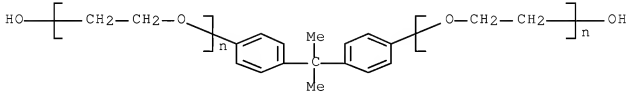


PAGE 1-B



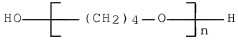
CM 3

CRN 32492-61-8
CMF (C2 H4 O)n (C2 H4 O)n C15 H16 O2
CCI PMS



CM 4

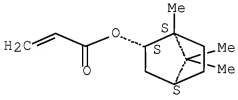
CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



CM 5

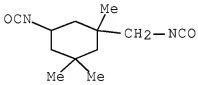
CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.



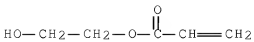
CM 6

CRN 4098-71-9
CMF C12 H18 N2 O2



CM 7

CRN 818-61-1
CMF C5 H8 O3



CM 8

CRN 88-12-0
CMF C6 H9 N O

IC ICM C03C025-24
ICS G02B006-44
CC 42-7 (Coatings, Inks, and Related Products)
Section cross-reference(s): 73
IT 504396-06-9P, 2-Hydroxyethyl acrylate-isobornyl acrylate-isophorone diisocyanate-ethoxylated bisphenol A-ethoxylated bisphenol A diacrylate-PTMG-N-vinyl-2-pyrrolidone-isophorone diisocyanate hydroxyethyl acrylate carbamate (1:2) copolymer
504396-07-0P, 2-Hydroxyethyl acrylate-isobornyl acrylate-polypropylene glycol-TDI-tricyclodecanedimethanol diacrylate-N-vinylcaprolactam-toluenediisocyanate hydroxyethyl acrylate carbamate (1:2) copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(secondary layers; optical fibers having transparent multilayer resin coatings without yellowing)

L35 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:1927 HCAPLUS Full-text
DN 126:32683
OREF 126:6611a,6614a
TI Manufacture of plastic lenses with high transparency and good heat and impact resistance
IN Fukushima, Hiroshi; Motonaga, Akira; Morita, Mitsuharu; Makino,

Shinji
PA Mitsubishi Rayon Co, Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08258172	A	19961008	JP 1995-68422	19950327
PRAI JP 1995-68422		19950327		

AB The title method involves the following steps; 1st partial polymerization of compns. comprising (A) 20-80 parts ≥2 (meth)acryloyl- containing urethane (meth)acrylates and/or epoxy (meth)acrylates, (B) 10-70 parts ≥2 (meth)acryloyl-containing multifunctional ester-type (meth)acrylates, (C) 5-50 parts monofunctional ester-type mono(meth)acrylates, (D) 0-30 parts vinyl monomers, (E) 0.005-5 parts active energy beam-sensitive radical polymerization initiators, and (F) 0.005-5 parts heat-sensitive radical polymerization initiators by irradiation of active energy beam and 2nd curing by heating. Thus, urethane dimethacrylate of isophorone diisocyanate and 2-hydroxypropyl methacrylate 40, nonabutylene glycol dimethacrylate 30, isobornyl methacrylate 30, 2,4,6-trimethylbenzoyldiphenylpohosph ine oxide 0.05, and tert-Bu peroxyisobutyrate 0.1 g were irradiated with UV light and then heated at 120° to give a test piece showing light transmittance 92% and good chemical, heat, and impact resistance.

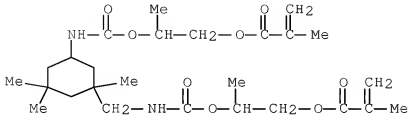
IT 184591-00-2P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of plastic lenses with high transparency and good heat
and impact resistance)

RN 184591-00-2 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,4-butanediyl) and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

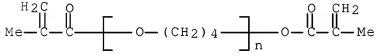
CRN 76701-94-5

CMF C26 H42 N2 O8



CM 2

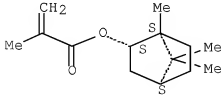
CRN 28883-57-0
CMF (C4 H8 O)n C8 H10 O3
CCI PMS



CM 3

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



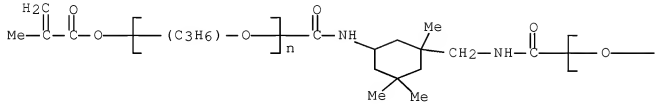
IC ICM B29D011-00
ICS C08F290-06; C08J005-00; G02B001-04
ICI B29K033-00, C08L033-06
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35
IT 184591-00-2P 184591-02-4P 184591-03-5P 184591-04-6P
184591-06-8P 184591-07-9P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of plastic lenses with high transparency and good heat
and impact resistance)

L35 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1996:246324 HCAPLUS Full-text
DN 124:344939
OREF 124:64075a,64078a
TI A nitrocellulose-modified UV-curable acrylated urethane prepolymer
AU Yildiz, Emel; Gueclue, Hande; Kuyulu, Abduelkadir; Yildirim, Hueseyin; Guengoer, Attila
CS Dep. Chem. Engineering, Turkish Scientific and Technical Research Council, Gebze-Kocaeli, 41470, Turk.
SO Angewandte Makromolekulare Chemie (1996), 236, 169-76
CODEN: ANMCBO; ISSN: 0003-3146
PB Huethig & Wepf
DT Journal
LA English
AB The effects of varying nitrocellulose concns. on mech. properties of polymeric films prepared from UV-curable acrylated urethane prepolymer were investigated. The acrylated urethane prepolymer was synthesized from isophorone diisocyanate and poly(propylene glycol monomethacrylate). Isobornyl acrylate and N-vinylpyrrolidinone were used as reactive diluents with the purpose of reducing the viscosity of the prepolymer as well as acting as solvent for nitrocellulose. An increase in nitrocellulose content caused an increase both in tensile strength and elongation values of polymeric films.
IT 170516-60-6P
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(mech. properties of crosslinked acrylated urethane prepolymer composition containing nitrocellulose)
RN 170516-60-6 HCAPLUS
CN 2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with α-hydro-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] ester with [3-[(carboxyamino)methyl]-3,5,5-trimethylcyclohexyl]carbamic acid (2:1) (9CI) (CA INDEX NAME)

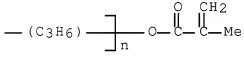
CM 1

CRN 170516-56-0
CMF (C3 H6 O)n (C3 H6 O)n C20 H30 N2 O6
CCI IDS, PMS

PAGE 1-A



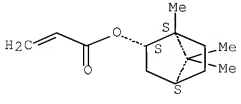
PAGE 1-B



CM 2

CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.



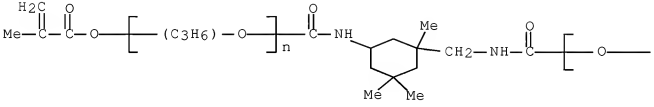
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 42
IT 170516-58-2P 170516-60-6P
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(mech. properties of crosslinked acrylated urethane prepolymer composition containing nitrocellulose)

L35 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1995:834480 HCAPLUS Full-text
DN 123:315424
OREF 123:56551a
TI Effects of reactive diluents on mechanical and physical properties of a UV curable acrylated urethane prepolymer
AU Yildiz, Emel; Gueclue, Hande; Yildirim, Hueseyin; Kuyulu, Abduelkadir; Guengor, Attila
CS Marmara Research Center, Turkish Scientific and Technical Research Council, Gebze-Kocaeli, 41470, Turk.
SO Angewandte Makromolekulare Chemie (1995), 230, 105-15
CODEN: ANMCBO; ISSN: 0003-3146
PB Huethig & Wepf
DT Journal
LA English
AB The title study was conducted using a prepolymer prepared from isophorone diisocyanate and polypropylene glycol monomethacrylate by stepwise addition UV-sensitive mixts. containing N-vinylpyrrolidinone (NVP), thiodiethylene glycol diacrylate (TDGDA), and isobornyl acrylate (IBoA) as reactive diluents were irradiated. An increase in TDGDA or IBoA content led to increased tensile strength and decreased elongation of the polymeric films. Above a certain concentration, a decrease in tensile strength was observed when NVP was used. The H2O absorption capacity of the acrylated urethane films depended on the type and amount of reactive diluent. Thermooxidative properties of the films were also improved by incorporation of reactive diluents into formulations.
IT 170516-60-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(effect of reactive diluents on properties of UV-curable acrylated urethane prepolymer)
RN 170516-60-6 HCAPLUS
CN 2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with α-hydro-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] ester with [3-[(carboxyamino)methyl]-3,5,5-trimethylcyclohexyl]carbamic acid (2:1) (9CI) (CA INDEX NAME)

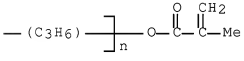
CM 1

CRN 170516-56-0
CMF (C3 H6 O)n (C3 H6 O)n C20 H30 N2 O6
CCI IDS, PMS

PAGE 1-A



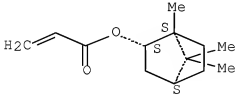
PAGE 1-B



CM 2

CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.



CC 37-5 (Plastics Manufacture and Processing)

IT 170516-57-1P 170516-58-2P 170516-59-3P 170516-60-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(effect of reactive diluents on properties of UV-curable acrylated urethane prepolymer)

L35 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1992:46351 HCAPLUS Full-text
DN 116:46351
OREF 116:7893a,7896a
TI Composition for plastic lenses
IN Fukushima, Hiroshi; Motonaga, Akira; Suda, Eriko; Nakajima, Mikito; Takeshita, Katsuyoshi; Kutsukake, Yusuke
PA Mitsubishi Rayon Co., Ltd., Japan; Seiko Epson Corp.
SO Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 441383	A2	19910814	EP 1991-101703	19910207
	EP 441383	A3	19920415		
	EP 441383	B1	19960508		
	R: DE, FR, GB, NL				
	JP 03231908	A	19911015	JP 1990-27118	19900208
	JP 2726325	B2	19980311		
	JP 03239711	A	19911025	JP 1990-36148	19900219
	JP 2760624	B2	19980604		
	JP 04065406	A	19920302	JP 1990-176223	19900705
	JP 2849172	B2	19990120		
	JP 04065407	A	19920302	JP 1990-176224	19900705
	JP 2849173	B2	19990120		
	AU 9170212	A	19910815	AU 1991-70212	19910204

AU 634338	B2	19930218		
US 5183870	A	19930202	US 1991-651945	199102 07
KR 180745	B1	19990515	KR 1991-2150	199102 08

PRAI JP 1990-27118 A 19900208
JP 1990-36148 A 19900219
JP 1990-176223 A 19900705
JP 1990-176224 A 19900705

AB Plastic lenses having high thermal resistance, high impact resistance, low water absorption, and good moldability comprise (1) 10-60 parts of a polybutylene glycol di(meth)acrylate, (2) 20-80 parts of a urethane poly(meth)acrylate or epoxy poly(meth)acrylate, (3) 5-60 parts of a mono(meth)acrylate, and (4) 0-60 parts of a compound having ≥1 polymerizable double bond. Thus, 35 g of nonabutylene glycol dimethacrylate, 40 g of a urethane dimethacrylate obtained by reacting isophorone diisocyanate with 2-hydroxypropyl methacrylate, 20 g of tricyclo[5.2.1.02,6]decan-8-yl methacrylate, and 5 g of 1,6-hexamethylene glycol dimethacrylate were copolymd. and molded to give a lens. The lenses showed a 92% of visible light transmittance and 1.504 refractive index at 20°.

IT 138417-06-8P
RL: PREP (Preparation)
(preparation of, for lenses)

RN 138417-06-8 HCAPLUS

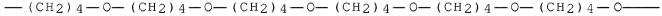
CN 2-Propenoic acid, 2-methyl-, 5,10,15,20,25,30,35,40,45,50,55-undecaoxanonapentacontane-1,59-diyl ester, polymer with 1,6-hexanediyl di-2-propenoate, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoic acid and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

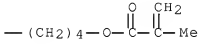
CRN 138393-29-0
CMF C56 H106 O15

PAGE 1-A

PAGE 1-B

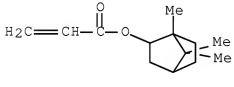


PAGE 1-C



CM 2

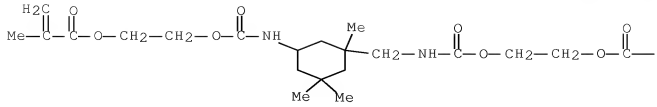
CRN 128946-20-3
CMF C13 H20 O2



CM 3

CRN 42405-01-6
CMF C24 H38 N2 O8

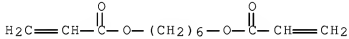
PAGE 1-A



PAGE 1-B

CM 4

CRN 13048-33-4
CMF C12 H18 O4



IC ICM G02B001-04
ICS C08F220-28; C08F220-10
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 38
IT 138393-20-1P 138393-22-3P 138393-23-4P 138393-24-5P
138393-25-6P 138393-26-7P 138393-27-8P 138393-28-9P
138393-30-3P 138393-31-4P 138393-32-5P 138393-33-6P
138395-04-7P 138395-05-8P 138417-04-6P 138417-05-7P
138417-06-8P 138417-07-9P 138417-08-0P
RL: PREP (Preparation)
(preparation of, for lenses)

L35 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1990:159177 HCAPLUS Full-text
DN 112:159177
OREF 112:26923a,26926a
TI Isocyanate-functional polymers
IN Petrie, Brian C.; Druetzler, Thomas W.; Harris, Rodney M.
PA Sherwin-Williams Co., USA
SO U.S., 8 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4861853	A	19890829	US 1985-814336	19851227
US 4983676	A	19910108	US 1988-292614	19881230
US 5098788	A	19920324	US 1990-635895	19901226
PRAI US 1984-609943	B2	19840514		
US 1985-814336	A3	19851227		
US 1988-292614	A3	19881230		

AB Isocyanate-functional polymers, useful as crosslinking agents or as moisture-curing polymers, comprise the addition polymerization reaction product of (A) 1-100% of ≥1 isocyanate-functional, ethylenically unsatd. monomer which comprises the reaction product obtained by the gradual addition of an ethylenically unsatd. monomer having a single active hydrogen to a diisocyanate (selected from the group consisting of isophorone diisocyanate and 2,4-TDI) where the final molar ratio of active hydrogen-containing monomer to diisocyanate is 1:1 and (B) 0-99% of ≥1 ethylenically unsatd. monomer which is free of active hydrogen functionality and which is copolymerizable with the ethylenically unsatd. isocyanate functional monomer. Thus, to a mixture of a 50% isophorone diisocyanate in 2-methoxypropyl acetate 2670, butylated hydroxytoluene 10.56, and di-Bu tin dilaurate (145°F) was dropwise added 1564 parts of a 50% solution of hydroxyethyl methacrylate in 2-methoxypropyl acetate, producing a 70% diadduct and 30% monoadduct monomer mixture Bu acetate (300 parts) was heated to 210°F and 2250 parts of the monomer mixture and 45 parts Vazo 64 were added over 5 h, producing a clear polymer solution with 46% solids content.
IT 126140-81-6P

RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of, having free isocyanate functionality)

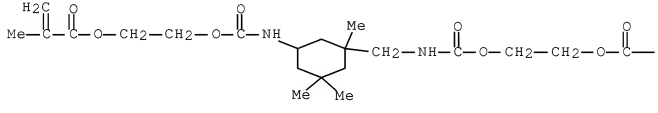
RN 126140-81-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, adduct with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (1:1), polymer with exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate, exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate and 2-[[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A

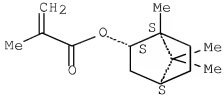


PAGE 1-B

CM 2

CRN 7534-94-3
CMF C14 H22 O2

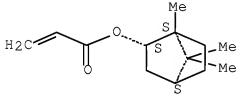
Relative stereochemistry.



CM 3

CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.

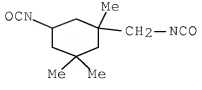


CM 4

CRN 103680-05-3
CMF C12 H18 N2 O2 . C6 H10 O3

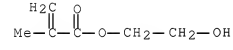
CM 5

CRN 4098-71-9
CMF C12 H18 N2 O2



CM 6

CRN 868-77-9
CMF C6 H10 O3



IC ICM C08F026-02
INCL 526302000
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 42
IT 126140-80-5P 126140-81-6P 126140-82-7P 126140-83-8P
126140-84-9P 126140-85-0P 126207-35-0P 126249-49-8P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of, having free isocyanate functionality)

L35 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1987:460229 HCAPLUS Full-text
DN 107:60229
OREF 107:10001a,10004a
TI Photocurable acrylic polymer information recording media
IN Sudo, Ryoichi; Miwa, Hiroaki; Tajima, Tetsuo
PA Hitachi, Ltd., Japan; Hitachi Maxell, Ltd.
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62013307	A	19870122	JP 1985-152521	19850712
JP 06044354	B	19940608		
PRAI JP 1985-152521		19850712		

AB Recording media with accurate stamper transcription, low retardation, good heat resistance, and high tensile strength are prepared by

feeding a mixture of photocurable acrylic polymer [copolymer of a compound (viscosity at 25° ≤3000 cP) with ≥4 (meth)acrylic groups, a dicarbamic acid ester with 2 (meth)acrylic groups, and a (meth)acrylic acid ester] and a photopolymn. initiator into a release agent-treated stamper covered by a transport plate and irradiating to cure the mixture A mixture of DPCA 30 40, 2:1 (mol) 2-hydroxyethyl methacrylate-isophorone diisocyanate adduct 30, isobornyl methacrylate 28, and benzoin iso-Pr ether 2% was filled in a stamper and irradiated 40 s with 400 mW/cm2 UV radiation of 320-400 nm wavelength to give a 1.2-mm-thick recording medium having good imaging properties, retardation (830 nm) 0.5 nm, heat-distortion temperature 110°, tensile strength 550 kg/cm2, warping <0.1 mm/300 mm, and transparency (830 nm) 99%.

IT 109359-26-4 109488-04-2 109488-05-3

RL: USES (Uses)

(photocurable recording media, containing photopolymn. initiators)

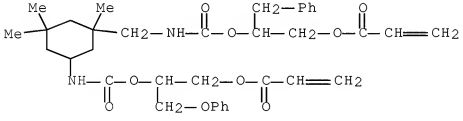
RN 109359-26-4 HCAPLUS

CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, 2-[[3-[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-2,2-bis[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]propoxy]methyl]-2-[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]-1,3-propanediyl ester, polymer with 3-phenoxy-2-[[[[3,3,5-trimethyl-5-[[[[1-[[(1-oxo-2-propenyl)oxy]methyl]-2-phenylethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]oxy]propyl 2-propenoate and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 109359-25-3

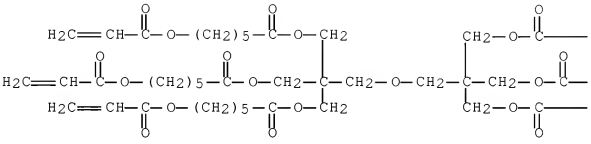
CMF C36 H46 N2 O9



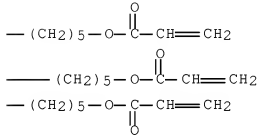
CM 2

CRN 93294-97-4
CMF C64 H94 O25

PAGE 1-A



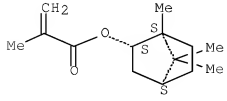
PAGE 1-B



CM 3

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



RN 109488-04-2 HCAPLUS

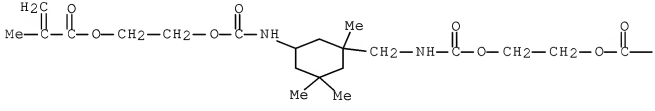
CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, triester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] tri-2-propenoate, polymer with exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-ethyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6

CMF C24 H38 N2 O8

PAGE 1-A



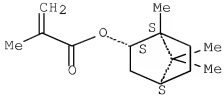
PAGE 1-B

CM 2

CRN 7534-94-3

CMF C14 H22 O2

Relative stereochemistry.

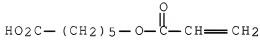


CM 3

CRN 93365-36-7
CMF C46 H64 O19
CCI IDS

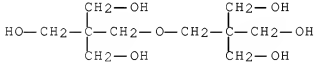
CM 4

CRN 93365-33-4
CMF C9 H14 O4



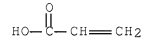
CM 5

CRN 126-58-9
CMF C10 H22 O7



CM 6

CRN 79-10-7
CMF C3 H4 O2

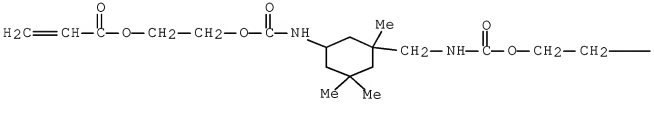


RN 109488-05-3 HCAPLUS
CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, triester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] tri-2-propenoate, polymer with endo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

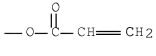
CM 1

CRN 42404-50-2
CMF C22 H34 N2 O8

PAGE 1-A



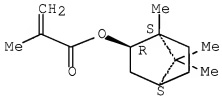
PAGE 1-B



CM 2

CRN 4647-84-1
CMF C14 H22 O2

Relative stereochemistry.

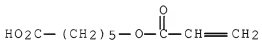


CM 3

CRN 93365-36-7
CMF C46 H64 O19
CCI IDS

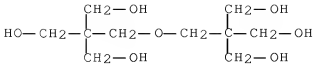
CM 4

CRN 93365-33-4
CMF C9 H14 O4



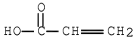
CM 5

CRN 126-58-9
CMF C10 H22 O7



CM 6

CRN 79-10-7
CMF C3 H4 O2



IC ICM B29C039-02
ICS B29C039-22; B29C039-26; C08F002-48; C08F020-10; G11B007-26
ICI B29K105-24, B29L011-00, B29L031-34
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 74
IT 109359-19-5 109359-20-8 109359-22-0 109359-24-2
109359-26-4 109359-27-5 109389-89-1 109488-04-2
109488-05-3
RL: USES (Uses)
(photocurable recording media, containing photopolymn. initiators)

=> d l37 1-7 bib abs hitstr hitind
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:Y

STRUCTURE 5, CLAIM 3

L37 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:881689 HCAPLUS Full-text
TI Photochromic films consist of a photochromic acrylic polymer

laminated between transparent polycarbonate films

IN Barachevsky, Valery Alexandrovich; Zapadinskiy, Boris Isaakovich; Ait, Anton Oskarovich; Gorelik, Alexander Michailovich; Dynaev, Alexander Alexandrovich; Kotova, Alla Vasilievna; Matveeva, Irina Alexandrovna; Pevzova, Larisa Alexandrovna; Shashkova, Valentina Trofimovna; Strokach, Yurii Petrovich; Valova, Tatyana Mikhailovna; Venidictova, Olga Vladimirovna; Jenninger, Werner; Koehler, Burkhard

PA Bayer Materialscience A.-G., Germany

SO Ger. Offen., 24pp.
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 102007002553	A1	20080724	DE 2007-102007002553	20070117
PRAI DE 2007-102007002553		20070117		

AB Photochromic films are manufactured by coating polycarbonate films with polymerizable acrylic monomer-based compns. containing photochromic compds., overlaying the coated films with another polycarbonate film, and thermally or photochem. polymerizing the assembly.

IT 1040752-44-0P 1040752-49-5P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(photochromic films consist of in-situ-prepared acrylic polymer layers containing photochromic compds. laminated between transparent polycarbonate films)

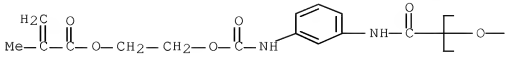
RN 1040752-44-0 HCAPLUS

CN INDEX NAME NOT YET ASSIGNED

CM 1

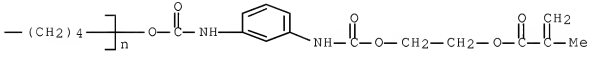
CRN 90638-50-9
CMF (C4 H8 O)n C30 H34 N4 O11
CCI IDS, PMS

PAGE 1-A



2 (D1—Me)

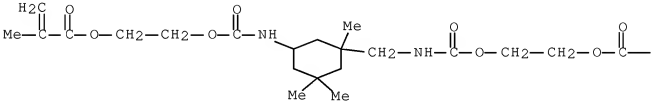
PAGE 1-B



CM 2

CRN 42405-01-6
CMF C24 H38 N2 O8

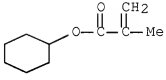
PAGE 1-A



PAGE 1-B

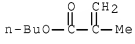
CM 3

CRN 101-43-9
CMF C10 H16 O2



CM 4

CRN 97-88-1
CMF C8 H14 O2

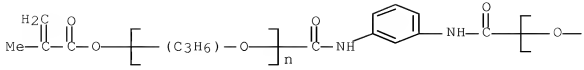


RN 1040752-49-5 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

CM 1

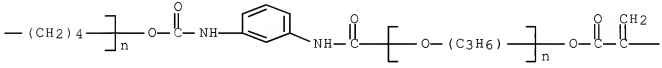
CRN 1040752-40-6
CMF (C4 H8 O)n (C3 H6 O)n (C3 H6 O)n C26 H26 N4 O9
CCI IDS, PMS

PAGE 1-A



2 (D1—Me)

PAGE 1-B



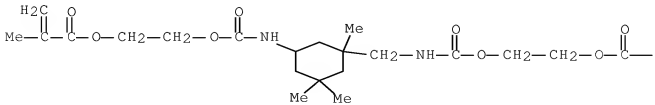
PAGE 1-C

—Me

CM 2

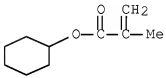
CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A



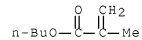
CM 3

CRN 101-43-9
CMF C10 H16 O2



CM 4

CRN 97-88-1
CMF C8 H14 O2



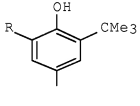
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 74
IT 1040752-44-0P 1040752-45-1P 1040752-46-2P
1040752-47-3P 1040752-48-4P 1040752-49-5P
1040752-51-9P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM

(Technical or engineered material use); PREP (Preparation); USES (Uses)
(photochromic films consist of in-situ-prepared acrylic polymer layers containing photochromic compds. laminated between transparent polycarbonate films)

L37 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:271617 HCAPLUS Full-text
DN 138:289083
TI Optical fibers having transparent multilayer resin coatings without yellowing
IN Suzuki, Atsushi; Tanaka, Kazunori; Hattori, Tomoyuki
PA Sumitomo Electric Industries, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003104760	A	20030409	JP 2001-302037	20010928
PRAI JP 2001-302037		20010928		

GI



I

AB All the coating layers in the optical fibers contain the same compds. chosen from I (R = C1-6 alkyl but tert-Bu). Thus, an optical fiber having a primary coating layer of polyether diol-isophorone diisocyanate (II) copolymer hydroxyethyl acrylate (III) carbamate, isobornyl acrylate (IV), N-vinylcaprolactam, nonylphenol acrylate, nonanediol diacrylate, and 3,9-bis[2-[3-(3-tert-butyl-4-hydroxy-5-methylphenyl)propionyloxy]- 1,1-dimethylethyl]-2,4,8,10-

tetraoxaspiro[5.5]undecane (V) and a secondary coating layer of polyoxyethylene bisphenol A ether-II copolymer III carbamate, polytetramethylene glycol-II copolymer III carbamate, II-III carbamate (1:2), IV, N-vinylpyrrolidone, polyethylene glycol bisphenol A ether diacrylate, and V showed the maximum change of initial yellowness index [ΔYI (D)] 1 after ≤336 h exposure to fluorescent light.

IT 504396-06-9P, 2-Hydroxyethyl acrylate-isobornyl acrylate-isophorone diisocyanate-ethoxylated bisphenol A-ethoxylated bisphenol A diacrylate-PTMG-N-vinyl-2-pyrrolidone-isophorone diisocyanate hydroxyethyl acrylate carbamate (1:2) copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(secondary layers; optical fibers having transparent multilayer resin coatings without yellowing)

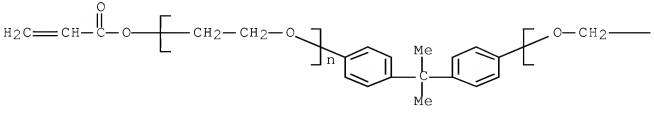
RN 504396-06-9 HCAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 1-ethenyl-2-pyrrolidinone, α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl), 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-hydroxypoly(oxy-1,2-ethanediyl)], α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)], rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

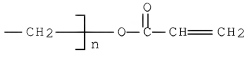
CM 1

CRN 64401-02-1
CMF (C2 H4 O)n (C2 H4 O)n C21 H20 O4
CCI PMS

PAGE 1-A



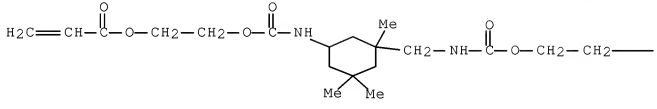
PAGE 1-B



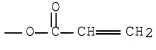
CM 2

CRN 42404-50-2
CMF C22 H34 N2 O8

PAGE 1-A

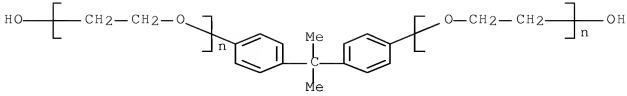


PAGE 1-B



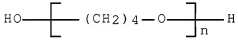
CM 3

CRN 32492-61-8
CMF (C2 H4 O)n (C2 H4 O)n C15 H16 O2
CCI PMS



CM 4

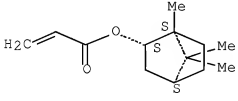
CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



CM 5

CRN 5888-33-5
CMF C13 H20 O2

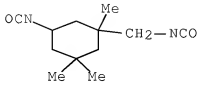
Relative stereochemistry.



CM 6

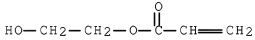
CRN 4098-71-9

CMF C12 H18 N2 O2



CM 7

CRN 818-61-1
CMF C5 H8 O3



CM 8

CRN 88-12-0
CMF C6 H9 N O

IC ICM C03C025-24
ICS G02B006-44
CC 42-7 (Coatings, Inks, and Related Products)
Section cross-reference(s): 73
IT 504396-06-9P, 2-Hydroxyethyl acrylate-isobornyl acrylate-isophorone diisocyanate-ethoxylated bisphenol A-ethoxylated

bisphenol A diacrylate-PTMG-N-vinyl-2-pyrrolidone-isophorone diisocyanate hydroxyethyl acrylate carbamate (1:2) copolymer 504396-07-0P, 2-Hydroxyethyl acrylate-isobornyl acrylate-polypropylene glycol-TDI-tricyclodecanedimethanol diacrylate-N-vinylcaprolactam-toluenediisocyanate hydroxyethyl acrylate carbamate (1:2) copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(secondary layers; optical fibers having transparent multilayer resin coatings without yellowing)

L37 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:1927 HCAPLUS Full-text
DN 126:32683
OREF 126:6611a,6614a
TI Manufacture of plastic lenses with high transparency and good heat and impact resistance
IN Fukushima, Hiroshi; Motonaga, Akira; Morita, Mitsuharu; Makino, Shinji
PA Mitsubishi Rayon Co, Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08258172	A	19961008	JP 1995-68422	199503 27
PRAI JP 1995-68422		19950327		

AB The title method involves the following steps; 1st partial polymerization of compns. comprising (A) 20-80 parts ≥2 (meth)acryloyl- containing urethane (meth)acrylates and/or epoxy (meth)acrylates, (B) 10-70 parts ≥2 (meth)acryloyl-containing multifunctional ester-type (meth)acrylates, (C) 5-50 parts monofunctional ester-type mono(meth)acrylates, (D) 0-30 parts vinyl monomers, (E) 0.005-5 parts active energy beam-sensitive radical polymerization initiators, and (F) 0.005-5 parts heat-sensitive radical polymerization initiators by irradiation of active energy beam and 2nd curing by heating. Thus, urethane dimethacrylate of isophorone diisocyanate and 2-hydroxypropyl methacrylate 40, nonabutylene glycol dimethacrylate 30, isobornyl methacrylate 30, 2,4,6-trimethylbenzoyldiphenylpohosph ine oxide 0.05, and tert-Bu peroxyisobutyrate 0.1 g were irradiated with UV light and then heated

at 120° to give a test piece showing light transmittance 92% and good chemical, heat, and impact resistance.

IT 134591-00-2P

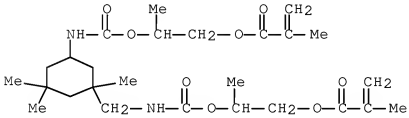
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of plastic lenses with high transparency and good heat
and impact resistance)

RN 184591-00-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,4-butanediyl) and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

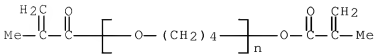
CM 1

CRN 76701-94-5
CMF C26 H42 N2 O8



CM 2

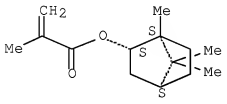
CRN 28883-57-0
CMF (C4 H8 O)n C8 H10 O3
CCI PMS



CM 3

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



IC ICM B29D011-00
ICS C08F290-06; C08J005-00; G02B001-04
ICI B29K033-00, C08L033-06
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 35
IT 184591-00-2P 184591-02-4P 184591-03-5P 184591-04-6P
184591-06-8P 184591-07-9P
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of plastic lenses with high transparency and good heat
and impact resistance)

L37 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1996:246324 HCAPLUS Full-text
DN 124:344939
OREF 124:64075a,64078a
TI A nitrocellulose-modified UV-curable acrylated urethane prepolymer
AU Yildiz, Emel; Gueclue, Hande; Kuyulu, Abduelkadir; Yildirim, Hueseyin; Guengoer, Attila
CS Dep. Chem. Engineering, Turkish Scientific and Technical Research Council, Gebze-Kocaeli, 41470, Turk.
SO Angewandte Makromolekulare Chemie (1996), 236, 169-76
CODEN: ANMCBO; ISSN: 0003-3146
PB Huethig & Wepf
DT Journal
LA English

AB The effects of varying nitrocellulose concns. on mech. properties of polymeric films prepared from UV-curable acrylated urethane prepolymer were investigated. The acrylated urethane prepolymer was synthesized from isophorone diisocyanate and poly(propylene glycol monomethacrylate). Isobornyl acrylate and N-vinylpyrrolidinone were used as reactive diluents with the purpose of reducing the viscosity of the prepolymer as well as acting as solvent for nitrocellulose. An increase in nitrocellulose content caused an increase both in tensile strength and elongation values of polymeric films.

IT 170516-60-6P

RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(mech. properties of crosslinked acrylated urethane prepolymer composition containing nitrocellulose)

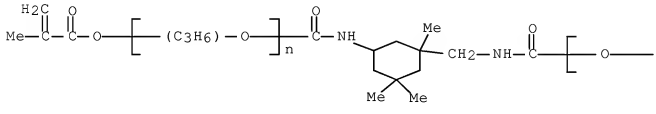
RN 170516-60-6 HCAPLUS

CN 2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with α-hydro-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] ester with [3-[(carboxyamino)methyl]-3,5,5-trimethylcyclohexyl]carbamic acid (2:1) (9CI) (CA INDEX NAME)

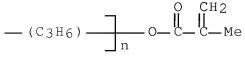
CM 1

CRN 170516-56-0
CMF (C3 H6 O)n (C3 H6 O)n C20 H30 N2 O6
CCI IDS, PMS

PAGE 1-A



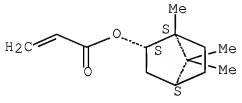
PAGE 1-B



CM 2

CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.



CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 42
IT 170516-58-2P 170516-60-6P
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(mech. properties of crosslinked acrylated urethane prepolymer composition containing nitrocellulose)

L37 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1995:834480 HCAPLUS Full-text
DN 123:315424
OREF 123:56551a
TI Effects of reactive diluents on mechanical and physical properties of a UV curable acrylated urethane prepolymer
AU Yildiz, Emel; Gueclue, Hande; Yildirim, Hueseyin; Kuyulu, Abduelkadir; Guengor, Attila
CS Marmara Research Center, Turkish Scientific and Technical Research Council, Gebze-Kocaeli, 41470, Turk.
SO Angewandte Makromolekulare Chemie (1995), 230, 105-15
CODEN: ANMCBO; ISSN: 0003-3146
PB Huethig & Wepf
DT Journal
LA English
AB The title study was conducted using a prepolymer prepared from isophorone diisocyanate and polypropylene glycol monomethacrylate by stepwise addition UV-sensitive mixts. containing N-vinylpyrrolidinone (NVP), thiodiethylene glycol diacrylate (TDGDA),

and isobornyl acrylate (IBoA) as reactive diluents were irradiated. An increase in TDGDA or IBoA content led to increased tensile strength and decreased elongation of the polymeric films. Above a certain concentration, a decrease in tensile strength was observed when NVP was used. The H2O absorption capacity of the acrylated urethane films depended on the type and amount of reactive diluent. Thermooxidative properties of the films were also improved by incorporation of reactive diluents into formulations.

IT 170516-60-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(effect of reactive diluents on properties of UV-curable acrylated urethane prepolymer)

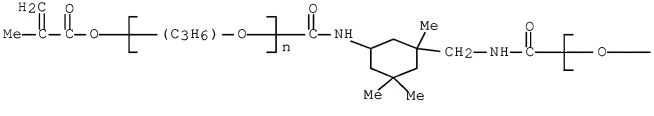
RN 170516-60-6 HCAPLUS

CN 2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with α-hydro-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly[oxy(methyl-1,2-ethanediyl)] ester with [3-[(carboxyamino)methyl]-3,5,5-trimethylcyclohexyl]carbamic acid (2:1) (9CI) (CA INDEX NAME)

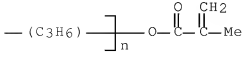
CM 1

CRN 170516-56-0
CMF (C3 H6 O)n (C3 H6 O)n C20 H30 N2 O6
CCI IDS, PMS

PAGE 1-A



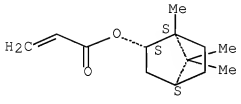
PAGE 1-B



CM 2

CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.



CC 37-5 (Plastics Manufacture and Processing)
IT 170516-57-1P 170516-58-2P 170516-59-3P 170516-60-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(effect of reactive diluents on properties of UV-curable acrylated urethane prepolymer)

L37 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1990:159177 HCAPLUS Full-text
DN 112:159177
OREF 112:26923a,26926a
TI Isocyanate-functional polymers
IN Petrie, Brian C.; Druetzler, Thomas W.; Harris, Rodney M.
PA Sherwin-Williams Co., USA
SO U.S., 8 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4861853	A	19890829	US 1985-814336	19851227
US 4983676	A	19910108	US 1988-292614	19881230

US 5098788 A 19920324 US 1990-635895
199012
26

PRAI US 1984-609943 B2 19840514
US 1985-814336 A3 19851227
US 1988-292614 A3 19881230

AB Isocyanate-functional polymers, useful as crosslinking agents or as moisture-curing polymers, comprise the addition polymerization reaction product of (A) 1-100% of ≥1 isocyanate-functional, ethylenically unsatd. monomer which comprises the reaction product obtained by the gradual addition of an ethylenically unsatd. monomer having a single active hydrogen to a diisocyanate (selected from the group consisting of isophorone diisocyanate and 2,4-TDI) where the final molar ratio of active hydrogen-containing monomer to diisocyanate is 1:1 and (B) 0-99% of ≥1 ethylenically unsatd. monomer which is free of active hydrogen functionality and which is copolymerizable with the ethylenically unsatd. isocyanate functional monomer. Thus, to a mixture of a 50% isophorone diisocyanate in 2-methoxypropyl acetate 2670, butylated hydroxytoluene 10.56, and di-Bu tin dilaurate (145°F) was dropwise added 1564 parts of a 50% solution of hydroxyethyl methacrylate in 2-methoxypropyl acetate, producing a 70% diadduct and 30% monoadduct monomer mixture Bu acetate (300 parts) was heated to 210°F and 2250 parts of the monomer mixture and 45 parts Vazo 64 were added over 5 h, producing a clear polymer solution with 46% solids content.

IT 126140-81-6P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of, having free isocyanate functionality)

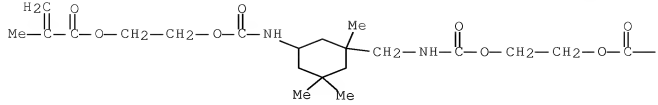
RN 126140-81-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, adduct with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (1:1), polymer with exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate, exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A

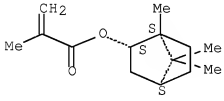


PAGE 1-B

CM 2

CRN 7534-94-3
CMF C14 H22 O2

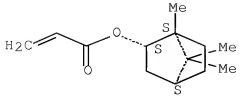
Relative stereochemistry.



CM 3

CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.

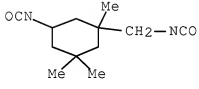


CM 4

CRN 103680-05-3
CMF C12 H18 N2 O2 . C6 H10 O3

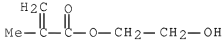
CM 5

CRN 4098-71-9
CMF C12 H18 N2 O2



CM 6

CRN 868-77-9
CMF C6 H10 O3



IC ICM C08F026-02
INCL 526302000

CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 42
IT 126140-80-5P 126140-81-6P 126140-82-7P 126140-83-8P
126140-84-9P 126140-85-0P 126207-35-0P 126249-49-8P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of, having free isocyanate functionality)

L37 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1987:460229 HCAPLUS Full-text
DN 107:60229
OREF 107:10001a,10004a
TI Photocurable acrylic polymer information recording media
IN Sudo, Ryoichi; Miwa, Hiroaki; Tajima, Tetsuo
PA Hitachi, Ltd., Japan; Hitachi Maxell, Ltd.
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62013307	A	19870122	JP 1985-152521	19850712
	JP 06044354	B	19940608		
PRAI	JP 1985-152521		19850712		

AB Recording media with accurate stamper transcription, low retardation, good heat resistance, and high tensile strength are prepared by feeding a mixture of photocurable acrylic polymer [copolymer of a compound (viscosity at 25° ≤3000 cP) with ≥4 (meth)acrylic groups, a dicarbamic acid ester with 2 (meth)acrylic groups, and a (meth)acrylic acid ester] and a photopolymn. initiator into a release agent-treated stamper covered by a transport plate and irradiating to cure the mixture A mixture of DPCA 30 40, 2:1 (mol) 2-hydroxyethyl methacrylate-isophorone diisocyanate adduct 30, isobornyl methacrylate 28, and benzoin iso-Pr ether 2% was filled in a stamper and irradiated 40 s with 400 mW/cm2 UV radiation of 320-400 nm wavelength to give a 1.2-mm-thick recording medium having good imaging properties, retardation (830 nm) 0.5 nm, heat-distortion temperature 110°, tensile strength 550 kg/cm2, warping <0.1 mm/300 mm, and transparency (830 nm) 99%.
IT 109359-26-4 109488-04-2 109488-05-3
RL: USES (Uses)
(photocurable recording media, containing photopolymn. initiators)
RN 109359-26-4 HCAPLUS
CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, 2-[[3-[[1-oxo-6-[(1-oxo-2-

propenyl)oxy]hexyl]oxy]-2,2-bis[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]propoxy]methyl]-2-[[[1-oxo-6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]methyl]-1,3-propanediyl ester, polymer with 3-phenoxy-2-[[[[3,3,5-trimethyl-5-[[[[1-[[(1-oxo-2-propenyl)oxy]methyl]-2-phenylethoxy]carbonyl]amino]methyl]cyclohexyl]amino]carbonyl]oxy]propyl 2-propenoate and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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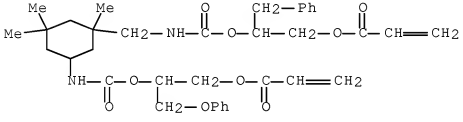
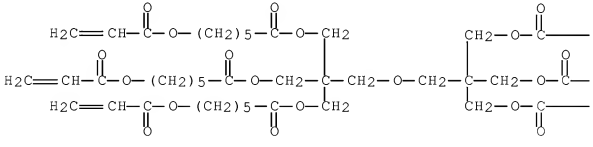
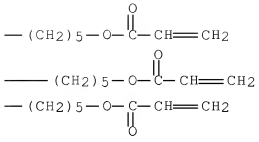
CRN 109359-25-3
CMF C36 H46 N2 O9



CM 2

CRN 93294-97-4
CMF C64 H94 O25

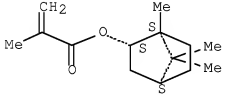




CM 3

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.

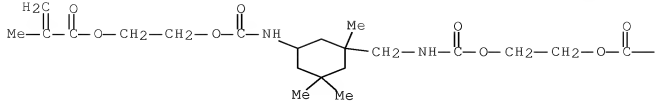


RN 109488-04-2 HCAPLUS
CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, triester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] tri-2-propenoate, polymer with exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-ethyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42405-01-6
CMF C24 H38 N2 O8

PAGE 1-A



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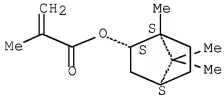
CM 2

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.

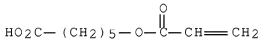


CM 3

CRN 93365-36-7
CMF C46 H64 O19
CCI IDS

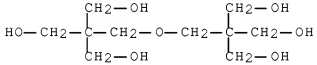
CM 4

CRN 93365-33-4
CMF C9 H14 O4



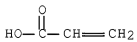
CM 5

CRN 126-58-9
CMF C10 H22 O7



CM 6

CRN 79-10-7
CMF C3 H4 O2



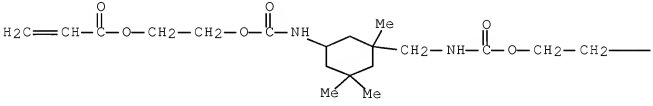
RN 109488-05-3 HCAPLUS
CN Hexanoic acid, 6-[(1-oxo-2-propenyl)oxy]-, triester with 2,2'-[oxybis(methylene)]bis[2-(hydroxymethyl)-1,3-propanediol] tri-2-propenoate, polymer with endo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[2-[(1-oxo-2-

propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

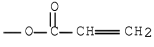
CM 1

CRN 42404-50-2
CMF C22 H34 N2 O8

PAGE 1-A



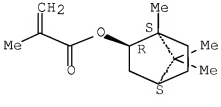
PAGE 1-B



CM 2

CRN 4647-84-1
CMF C14 H22 O2

Relative stereochemistry.

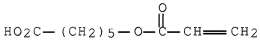


CM 3

CRN 93365-36-7
CMF C46 H64 O19
CCI IDS

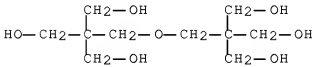
CM 4

CRN 93365-33-4
CMF C9 H14 O4



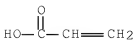
CM 5

CRN 126-58-9
CMF C10 H22 O7



CM 6

CRN 79-10-7
CMF C3 H4 O2



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ICI  B29K105-24, B29L011-00, B29L031-34
CC   38-3 (Plastics Fabrication and Uses)
     Section cross-reference(s): 74
IT   109359-19-5   109359-20-8   109359-22-0   109359-24-2
     109359-26-4   109359-27-5   109389-89-1 109488-04-2
     109488-05-3
     RL: USES (Uses)
        (photocurable recording media, containing photopolymn. initiators)
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STRUCTURE 6, CLAIM 3


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DN   142:57311
TI   Crosslinkable methacrylic resin composition and transparent member
IN   Kogo, Osamu; Kawasaki, Noboru; Enna, Masahiro
PA   Mitsui Chemicals, Inc., Japan
SO   PCT Int. Appl., 44 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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PI   WO 2004108778        A1    20041216    WO 2004-JP8404
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              GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,
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EP	1632507	A1	20060308	EP 2004-745953	20040609
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CN	1784433	A	20060607	CN 2004-80012529	20040609
EP	1867665	A2	20071219	EP 2007-18901	20040609
EP	1867665	A3	20080402		
	R: DE, FR, GB, IT				
KR	749004	B1	20070813	KR 2005-723210	20051202
US	20060155085	A1	20060713	US 2005-559821	20051208
KR	2007030917	A	20070316	KR 2007-701701	20070124

PRAI JP 2003-163748 A 20030609
JP 2003-360521 A 20031021
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WO 2004-JP8404 W 20040609
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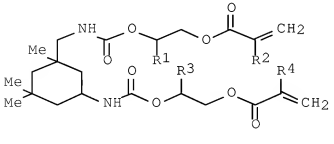

I

AB The composition contains (A) a Me methacrylate monomer and/or a syrup thereof, (B) compound I (R1 and R3, and R2 and R4 independently represent H atoms or Me groups), and (C) a radical initiator. This composition enables to obtain a crosslinked methacrylic resin with improved properties such as heat resistance, rigidity, low water absorbency and chemical resistance without deteriorating high transparency of original PMMA. A transparent member and an optical member composed of such a resin are also disclosed.

IT 808741-59-5P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylic resin compns. with good chemical, heat and water resistance for transparent and optical materials)

RN 808741-59-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, decahydro-1,4:5,8-dimethanonaphthalen-2-yl ester, polymer with methyl 2-methyl-2-propenoate and 2-[[[[[1,3,3-trimethyl-5-[[[1-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]carbonyl]amino]cyclohexyl]methyl]amino]carbonyl]oxy]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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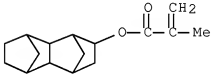
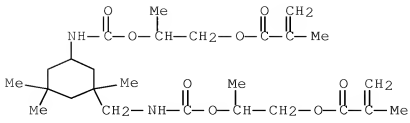
CRN 111404-25-2
CMF C16 H22 O2



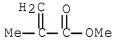
CM 2

CRN 76701-94-5
CMF C26 H42 N2 O8



CM 3

CRN 80-62-6
CMF C5 H8 O2



IC ICM C08F220-14
ICS C08F220-36
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
IT 808741-48-2P 808741-49-3P 808741-50-6P 808741-51-7P
808741-52-8P 808741-53-9P 808741-54-0P 808741-55-1P
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809241-89-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(methacrylic resin compns. with good chemical, heat and water resistance for transparent and optical materials)
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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